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To Improve the Soil and the Mind.

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No. V.

Theory of the Management and Application of Barn-Yard Manure.

Which is best, fresh or fermented manure? Neither is best always, and each is best sometimes.

Perfectly fresh manure is probably not a fertilizer for our cultivated plants. Doubtless it cannot be absorbed and appropriated to any great extent by the higher kinds of vegetation, until it has undergone those changes which are comprehended under the terms fermentation, putrefaction and decay. All evidence points out the *products* of these changes to be the actual food of plants. We are quite warranted in assuming that stable or yard manure must ferment or decay before it can exert much beneficial action on a growing crop. It does not necessarily follow, however, that the manure must be fermented in the usual sense, i. e., rotted, above ground, before it is given to the soil. Manure may often decay in the soil itself, so rapidly as to become immediately useful to crops, though applied in a fresh or nearly fresh state.

It may also remain for a time undecomposed and innutritive to the plant. This will depend chiefly upon the character of the soil,—will be affected also by weather, and by the nature of the manure. In order to enable us to decide what will happen to fresh manure if buried in the soil, we must in the first place know what are the conditions of decomposition. These are, 1st, *moisture*, not wetness nor dryness—2d, *warmth*—3d, access of atmospheric air, or of the oxygen of the air. Furthermore, other things being equal, the decomposition of manure is more rapid as it contains more nitrogenous matter. Horse-dung ferments quicker than cow-dung; it is richer in nitrogen. On the other hand, the more coarse litter that is mixed with dung, the slower will the whole ferment; while the porosity or division of it, which increases its contact with air, must facilitate decomposition. The last mentioned circumstances, it will be seen, are to a degree antagonistic, and compensate each other.

If our premises thus far, are correct, it is obvious that in soils which are warm, porous, and neither too wet nor too dry, manure will decompose readily, so that it may be furrowed under to a certain depth, in the fresh state, and yet produce its maximum effect upon the soil. It is also plain that manure, especially

if mixed with much coarse long litter, may be protected more or less from decomposition, when buried in a wet or heavy soil, and may therefore fail to manifest a decided action, or so decided an action as an equivalent of previously fermented manure.

From the above, we are not by any means warranted in assuming that fresh manure is best on all light warm soils, and fermented manure on all clayey or heavy soils. There are substances which exert a specific action on decomposing organic matters; some facilitate, others hinder their decomposition. Lime is generally supposed to belong to the former class, and gypsum is known to be one of the latter kind of bodies. It is not improbable that oxyd of iron and alumina when existing as such in the soil, may check decomposition; probably too, the humus of the soil, when of the acid sort, as when formed in presence of much water, may hinder decomposition. But of the precise effect of the various ingredients of the soil we possess no minute knowledge. These suggestions are made merely to show that probably there are many causes that may modify the process of decomposition, and consequently the apparent value of manure.

The depth to which the manure is buried is of the greatest influence. A case has just come to my knowledge, of a garden into which stable manure was deeply trenched by a former owner several years since; the present proprietor has recently found the buried manure just advanced to a medium state of decomposition. If manure be covered shallow in a light soil, especially if it be imperfectly covered, in dry weather it may become too dry to be of service to the vegetation. When managed as Mr. CLARK describes, (*Co. Gent.*, No. 8, p. 122, 1857,) the results are found to be good. He turns the *moist* and solid manure under a *sod*. Decay goes on with sufficient rapidity—the manure cannot dry up. Will Mr. CLARK have the goodness to inform us how deeply he covers the manure—whether he turns the sod flat or leaves it inclined—and what are the characters of his soil and sub-soil,—especially how porous and how retentive of moisture and of water they are?

Mr. JOHNSTON of Geneva, and Mr. NORTON of Farmington, Ct., if we mistake not, experience least immediate benefit from manure plowed in when fresh. Is

this due to the fact that their soils are clayey, and thus oppose the rapid decomposition of manure?

Thus far we have considered the manure merely as direct food to the plant, but the question is by no means so simple. The texture, and what besides is included under the term "physical characters" of the soil, are often much changed by a large application of coarse yard-manure. It may happen that a heavy soil will derive more benefit from the loosening effect of incorporating with it a large amount of vegetable matter, than from the rapid nourishing action of fermented manure. Nay, it may be that the latter action cannot exhibit itself until in some way the texture of the soil has been improved. On light soils, which suffer from too ready drying up of the surface, the application of coarse manure may well assist to rectify this fault, as the power of the humus which would accumulate in the soil by this treatment, to retain moisture, is, according to Schubler, seven times greater than that of sand, and three to four times greater than that possessed by medium loams.

The advantages of fermenting manure are chiefly, 1st, Lessening its bulk and weight, whereby the expense of transportation is diminished by one-third or one half—2d, Converting the crude matters into soluble and available forms of nutriment to the plant, thus quickening the action of the manure—3d, Convenience of incorporation with the soil, the coarse, long litter being broken up and made fine. Rotted manure is best on soils or crops which demand a *quick* fertilizer, and under circumstances where an immediate rather than permanent benefit is desired, and would seem especially advantageous on soils so rich that they only need a little active manure to produce good crops. On the whole it is chiefly a question of time. Long manure acts slower on any given soil than fermented manure; but its effect is correspondingly more durable. The matter of time is, however, one of the greatest importance. We want the manure available at just those periods when the plant may derive the greatest advantage from it, and we want it to become available just as fast as the *rapidly-growing* plant requires.

Thus far we have not raised the question—Does fresh manure suffer loss by fermentation? We have assumed that the manurial value of both is not materially different in amount but only in activity. We have sought to account for the differences of opinion and experience with reference to the use of fresh or rotted manure, by differences of soil, &c.

With this, as with many of the great topics of Agriculture, there are two sides to the question, and when we approach it from opposite points, we may well take a lesson from the story of the Knights, who met where a shield was placed in the highway, and as they halted to admire its costly workmanship, one cried out, "Who raised this silver shield?" to which the other rejoined, "Sir Knight, are you blind to say this is silver? By my good sword, it's the purest gold!" A violent dispute arose, and shortly the warriors flew at each other with such fury that they both were wounded and unhorsed. A good Samaritan who came that way, staunched their wounds and revived them, and then inquired the cause of their dispute. They began to renew the battle of words, but he bade them hold their peace, which they did, and were ashamed as he said, "The shield is silver on one side and gold on the other."

What loss there may be in fermenting manure, will be the subject of a future paper. S. W. J. Yale Laboratory, New-Haven, Ct.

THE COUNTRY GENTLEMAN—And here I wish to say for your encouragement, and for the benefit of those who want a sound agricultural paper, that in my opinion the "Country Gentleman" is at the head of the list, and that its sound practical teachings, if read, cannot fail to produce a salutary influence upon the agricultural interests of our country. L. A. B.

ENTOMOLOGY.

No. XIV.—Insects Imbedded in the Interior of Wood.

Mr. N. of Shrewsbury, Vt., in a letter written on the 25th of last March, encloses three specimens of "something" of which he says he had that day found 15 or 20 specimens. He wishes to know their "name, habits, and whether they are injurious to agriculturists or horticulturists." Mr. N. ought to have stated, what we doubt not was the fact, that in splitting some fire-wood at his door, he came upon these insects imbedded in the interior of the wood, without any visible orifice by which they could either enter or crawl out of the cells in which they were lying, in a torpid state. He ought also to have informed us that in some places this wood was decaying, and contained a number of large white grubs which had perforated it in holes the size of pipe-stems, which holes were stuffed full of a powder of the same color with the wood; and he ought also to have told us the kind of wood in which he found them. All these are important facts, which we presume were well known to Mr. N. when he wrote this letter. Why he is wholly silent with respect to them, and asks us to "publish" what the habits of this insect are, and whether it is injurious to field crops or gardens, when he himself knows that it is to forest trees that it is injurious, we cannot divine. It certainly looks as though he was covertly aiming to draw from us an account of this insect, which he can show to be incorrect. But we do not wish to judge him thus harshly, and are therefore willing to suppose, that, being surprised to meet with these insects in such an unusual situation, he simply wishes to ascertain whether any body else has ever seen the same phenomenon, and therefore avoids giving any clue to the circumstances under which he met with these specimens. However commendable his caution may be, in not proclaiming that he has discovered "a unique specimen of a very curious character, unlike any thing ever before seen in the world," until he has ascertained whether it really is such a rarity, he still should have told us, frankly and candidly, what he knows in the premises, before asking us to give him what we know. Our object in writing these articles is to add to our own knowledge, as well as that of our readers. With the extended circulation which the Country Gentleman enjoys, we hope by this series of communications to induce its readers to notice the habits of every interesting insect, and especially every injurious one, which makes its appearance in any part of our country, and send us an account of it accompanied with specimens whereby we will be able to ascertain its name and describe it, so that such insect and its habits will be definitely known through all coming time. From the information thus communicated to us we have already been able to place on record the Hunter weevil, the wheat Thrips, the Prickly Leptostylus, and other insects, whose history was before unknown. And by continuing this course we hope to gradually obtain an acquaintance with all the more important insects of our country. We trust that no new and unknown depredator of this class will be permitted to make its appearance in any district or neighborhood without an account of it being communicated to us.

The insect to which allusion has been made above, is the Pigeon Tremex (*Tremex Columba*), which name appears to have been bestowed upon it by Linnæus merely from fancy, as other species related to this have been also named the sparrow, the bat, the camel, &c., although they are in no respect analogous to these animals. They pertain to the Family UROCEIDÆ of the Order HYMENOPTERA. This insect has some resemblance to a large wasp, but its abdomen is closely joined to the thorax, without any such interval between as

occurs in the wasp. It is cylindrical and as thick as an ordinary sized lead pencil, and about an inch and a quarter long, of a black color more or less varied with brownish yellow in different individuals, the wings being smoky blackish and shining. In the female, the abdomen has six light yellow bands, the forward one of which is much the broadest, and all the others are interrupted on the middle of the back. Her ovipositor is formed of very coarse horny bristles which arise from the middle of the under side of the abdomen and project backwards like a tail, reaching a quarter of an inch beyond its tip. With this apparatus she is able to bore deep into solid wood to deposit her eggs. The grubs which hatch from these eggs are white, fleshy, footless cylindrical worms, with a deeply impressed line or furrow on each side beneath, extending their whole length; and the hind end is furnished with a small sharp-pointed black horn or hook which curves downwards. By these marks they may readily be distinguished from other borers in timber. They grow to more than an inch in length, and to the thickness of a lead pencil. They feed upon the wood, gnawing long slightly curved holes. They are placed so deep in the wood, that they cannot thrust their castings out of their burrows, as many other borers do. Hence their burrows are filled and densely packed with this dry powder, and externally there are no indications by which to know that these worms are present in a tree, unless the holes happen to be discovered out of which those which have completed their transformations have crawled.

Dr. Harris states that he has found these insects in pear trees, in elm, and in button-wood. I have found them in maples much oftener than in any other tree, and have also met with them in beech; and in Illinois a female was captured depositing her eggs in the burr oak. It is therefore probable that they infest all our forest trees, except perhaps those of the pine and spruce family. The wood in which we meet with these insects is always in a decaying state, and some persons have hence supposed that it is only trees which are old and beginning to decay, to which they resort. But I have taken the female depositing her eggs in thrifty young maples and oaks. It is therefore evident that they attack timber which is perfectly sound, speedily reducing it no doubt to a decaying state. When they once make a lodgment in a tree they continue to infest it more and more, until it is dead and so much decayed that they are obliged to abandon it and repair to other trees. At the moment of my copying for the press this line, a person informs me he lately met with what I presume was one of these insects, in a maple log, its cell being just large enough for it to be crowded into it, and there being not the least indication of any passage or track by which it had come to this spot. The log was split up by him for fire-wood, and was perfectly sound in every part, and no other insect or worm was found in it. As the eggs of these insects are sunk so deep in the wood, and the larvæ work into it still deeper, it seems out of our power to administer any relief to a tree which becomes infested. Its gradual decay and death probably cannot be averted. Whether it is possible to impregnate the sap and wood of the tree with any alkaline, mercurial or other substance which will destroy these insects without injuring the tree, the present state of our knowledge does not enable us to say. The best thing we can do, is, to make ourselves acquainted with the female Tremex, and whenever one of them is found around the trunk of a tree, or in any other situation, capture and destroy her. Where these insects are found to have made a lodgment in a valuable tree, it may perhaps be possible to arrest their career by winding the trunk and larger limbs with straw or matting, to such a thickness that the female will be unable to reach through it with her ovipositor to place her eggs in the wood. Those grubs which are already lodged in the tree, on completing their transformations, will probably cut their way out through such covering, but will be obliged to select some new situation for their progeny. The knowledge of this insect which we at present pos-

sess, is too imperfect to enable us to give anything more than mere suggestions with regard to remedial measures.

The reader is aware that the wood borers generally, like most other injurious insects, are destroyed and their undue multiplication prevented by other insects which prey upon them. But we should expect that the Pigeon Tremex, lying as it does deep in the solid wood, would be quite beyond the reach of any parasitic or predaceous enemy of this kind. And yet, if it were so, and this species were allowed to increase and extend itself unchecked, such numbers would soon be generated that it is probable all the trees in our forests would become infested and destroyed by them. And we accordingly find that He who created this insect and gave it the interior of the solid wood for its abode, knew how to create another insect furnished with a suitable apparatus for piercing deep into the wood, to reach and destroy this one. The mode in which this parasite of the Tremex works its long tail-like ovipositor into the wood is very curious and has never yet been accurately described. To give an intelligible account of this insect, and its singular organs and the mode in which it uses them, would extend this article to an undue length, and we will therefore be obliged to devote a future number to this subject. ASA FITCH.

Kiln for Drying Fruit.

EDITORS COUNTRY GENT.—I noticed in your paper of Feb. 19th, an inquiry for a kiln for drying fruit, and in reply will describe one I have. In the summer of 1855 I was building a smoke-house, 5 by 6—the foundation of brick three feet above the ground for the purpose of depositing ashes—the top of wood, extending six feet above the brick work, with an arch on one side of the brick work three feet long, two wide, in which to make the smoke. While erecting I inquired of my mason if he knew of any good plan for a kiln dry? He replied that he did not, but suggested that I could soon convert my smoke-house into a good one by putting a stove into the arch; and upon his suggestion, when finishing my building I made three doors in front, and put in strips of board 10 inches apart, on which to slide the drawers—putting in the middle one temporarily, to be removed when used for smoking. Had three tiers of draws, six in a tier, making eighteen in all.

I put a box stove in the arch, conducted the pipe around horizontally, then up to the chimney, leaving an aperture through the wall into the building some six inches in diameter larger than the pipe, so that the heat from the stove would naturally pass into the room. I also had sliding doors in the gable, so that the circulation would be brisk when the kiln was first filled, which doors could be closed when the fruit began to dry and the escape of moisture become less.

My drawers I made of strips of boards as follows—18 inches wide—4½ feet long—4 inches deep—cut gains with a saw deep enough to receive a stout twine, half an inch apart—put on the warp first, and then wove in the filling with a long wire, nailing on a strip of lath over the twine to prevent wear, and to keep it in its place.

When apples became fit to dry, we prepared them by cutting the quarters once or twice in two, according to the size of the apple—(care must be taken to have the pieces as near of a size as possible)—and filled our new kiln-dry, and were well pleased with the result. We found we could put in seven bushels at once very nicely, and requiring from 24 to 36 hours of time to cure. When they came out they were white and crisp, and by lying in a pile a few days they would absorb moisture enough to pack nice, and when packed will keep without any fear of being eaten up by worms, if not consumed the same season.

Apples thus dried are far superior to those dried in

the primitive way, either of stringing and hanging around the kitchen stove as a roost for flies, or spread out and dried in the sun, where they are often injured if not spoiled by storms. As mine is only used in a small way for drying for the family, and what few surplus apples that are not fit for market, I would recommend any one going into the business and drying for market, to build on a larger scale and have more drawers, as I think mine are about the right size to be easily handled. I took the stove out and used the building for smoking a year ago, and not having apples to dry last fall, cannot tell whether the smoke will have any injurious effect on the fruit or not. My impression is that thorough ventilation before using for drying fruit will expel all the odor of the smoke—if it should not, I think white-washing will. H. DABOLL. Canal, Onondaga Co., N. Y.

Application of Barn-Yard Manure.

Of late there has been much discussion in the columns of the Co. Gent. on the application of manures to the soil, preparatory to planting it with corn. This has been occasioned by Mr. JOHN JOHNSTON's statements of his management and application of manures to his land for the corn crop. For the benefit of new subscribers, who have not seen Mr. J.'s first letter, we give a synopsis of his system. Mr. J. annually sows from 50 to 70 acres of wheat, and also has many acres in oats, corn, &c. He winters from five to six hundred sheep, and 15 to 20 head of cattle. To use up this large amount of straw and corn-fodder, it is daily, through the winter, freely strewn over his yards; what is not eaten is trodden and mixed with the droppings of the stock. Of course during winter the straw does not ferment or decompose. Generally, all this long manure is put in large heaps in the spring, where it remains till sowing of winter wheat, for which a portion of the now *rotted* manure is used. That portion of the manure intended for the next year's corn crop, is in September carted on to grass-land, and evenly spread over it, where it lies till the next April or May, when the land is plowed for corn. His method is objected to on the ground that there must be much loss of ammonia and other gases from the decomposition of the straw and manure during summer, and also from that portion upon the greensward. But as Mr. J. "believes the great *scare-crow*, the escape of ammonia by fermentation, is all gammon," he does not feel disturbed about that matter.

To show that Mr. J. is not entirely alone in his views, we copy a short article from *Littell's Living Age* of Nov. 15, 1856. It says:

"In a paper on farm-yard manure, by Dr. Voeckler, Prof. of Chemistry, Royal Ag. College, at Cirencester, we find statements that will be a surprise to some farmers. For example: the liquid drainage of dung-heaps, he says, is more valuable than the urine of animals, because it contains phosphate of lime, which is scarcely to be found in the other. That no loss arises from spreading manure on the surface of a field; on the contrary, the fermentation is stopped, and the escape of volatile matters thereby ceases; and if it be let to lie till the rain has washed it in, is far more beneficial than burying it at once. And 'in the case of clay soils,' he remarks, 'I have no hesitation to say the manure may be spread even six months before it is plowed in, without losing any appreciable quantity of manuring matters.'"

From the foregoing it will be seen that Farmer J. and Prof. V. are "hand in glove" with each other. One is a practical farmer, the other is a scientific one. The practice of one, and the teaching of the other, is the very antipodes of the practice of myriads of good farmers and the teachings of other scientific professors.

Well may we hard-working farmers exclaim, "What is truth?" L. B.

How to Use Hen Manure.

MESSRS. TUCKER & SON—In your Co. Gent. of the 5th Feb., I see the request for the experience of some one using hen manure. I have, for several years, kept a large quantity of hens for the *profit*, (as I consider the profit of one hen to exceed that of one sheep,) and have carefully saved the manure, which I put into barrels, and mix it well with ground plaster as I gather it, enough to dry it and to keep it from losing its goodness; then keep it dry till planting time. I then take an empty barrel or tub, and mix the hen manure and plaster with more plaster, so that it will be about two parts plaster and one hen manure, and with a sharp spade chop into the mixture, which will very readily pulverize by a little chopping and spading over, and it is then ready for the hill of corn or potatoes. If I have any left after planting, I use it at hoeing, and find that my corn so treated is not troubled with any worms, and that the crop is equal to that grown where I spread my barn-yard manure. I think farmers can safely pay fifty cents per bushel for hen manure, if it has not been laid on the ground. It pays to have boxes under all the hen roosts. There are many farmers that will give away the hen manure to the tanners, but if they will but one year try the above method of using it, they will be perfectly pleased with the result. D. A. BULKLEY. Stone Hill Farm, So. Williamstown, Mass.

About Strawberries.

MESSRS. EDITORS—I will not attempt to give the reason why those strawberries failed; but if you please I will give two items of my own experience, and Mr. MCCARTHY can judge for himself whether our failures arose from like causes. Some years ago, (before I "took the papers") I set a bed of strawberries with plants from a field of two acres which were in full bearing. They were set in August, and were full of flowers the next spring, but at picking time they were not full of fruit. I supposed that was owing to their not being fully established, but in the course of the year I read "Downing's Fruit Book," and the next spring at flowering time I examined them "by the light of science," and found that nineteen-twentieths of them were staminate plants. I suppose the reason of this was that the stamens are stronger growers than the pistils, and one of course always selects the strongest plants. I have since set another "patch," with plants from three different beds, and there proved to be not a stamen among them. Of course the flowers, like Mr. McCarthy's, dried up without fruit.

I have a bed now, however, to the sex of every individual plant of which I can make oath if necessary, and I shall never set another bed without being certain of my kinds. So many are disappointed from the above causes, that I think some of the hermaphrodite varieties, (Peabody's new or Hooker's perhaps,) are better for general cultivation. This, however, is theory. EDWIN Y. BULL. Meriden, Ct.

Cure for Horn Ail.

EDS. CO. GENT.—I have a cure for the horn-ail, that I do not recollect of ever seeing in your paper. It is very simple, but I have known it to cure when nothing else that could be thought of would. Take a piece of alum as large as a walnut, pulverize it and put it into about a wine-glass full of sharp vinegar—turn up the head, and pour it into one ear. In two or three days pour the same quantity in the other ear. A third application is seldom necessary. A. ALLEN, JR. Littleton, N. H.

Good and Bad Cultivation—The Difference.

V. ALDRICH, of Arispe, Bureau county, Illinois, a skillful and energetic nurseryman and cultivator of fruit, has at our request, furnished the following interesting and valuable facts, showing the difference between good and neglected cultivation, which are but a fair sample of the results of these two modes of treatment, in whatever region of the country they may have been adopted. We commend these facts to the especial attention of those planters who have adopted the notion that fruit trees need no attention, and will take care of themselves:—

My orchard (the oldest part is ten years planted,) has been cultivated every year, and is now the admiration of all who see it, and I must confess that I feel a little proud of it. The ground when planted was raw unbroken prairie. We plowed a few back furrows for the row of trees, the sod was dug and laid one side, holes dug about two feet deep and large, the earth pounded fine and filled in until high enough for the tree, and then the tree set.

Two days ago we measured the height, breadth of top, and size of trunk near to the ground, of several varieties that were planted ten years ago this spring, with the following results: No. 1. Summer Queen, 18 feet high, the top 16½ broad, two feet six inches round the trunk near the ground; 2d. Early Harvest, 15 feet high, 12 feet broad, 22 inches round trunk; 3d. Rawles' Jannet, 17 feet high, 13½ broad, 23 inches round trunk; 4th. Yellow Bellflower, 18 feet 10 inches high, 19 feet broad, 2 feet 7 inches round trunk; 5th. Domine, 18 feet high, 17 feet broad, 25 inches round trunk; 6th. Sweet Romanite, 15 feet high, 17 feet broad, 2 feet 5 inches round trunk; 7th. Wine Sap, 19 feet high, 17 broad, 2 feet 4 inches round trunk; 8th. Honey Pippin, 17 feet high, 20 feet broad, 2 feet 7 inches round trunk. Two years ago last fall I exhibited at our fair, specimens of the Domine that weighed 17 oz., and other varieties of corresponding size.

Mr. T. of H., has an orchard the same age of mine—his was laid down with blue grass for several years. When Mr. T. examined my fruit, he wondered what should make it so much larger than his. He said his were not larger than black walnuts, which I thought very singular; next morning before the fair opened, I visited his grounds to learn the cause of his small fruit, and found his orchard in a close blue grass sod, and that season being a dry one, the little rain we had did not wet through the sod, and the land being naturally dry, the grass absorbed all the moisture, hence the small fruit.

Dr. P. of H., showed me his orchard several years ago. It had all been cultivated and looked well, except one tree planted in grass, that was not one-quarter the size of the others. The spring previous he had it dug round three or four feet on all sides, and applied nearly a load of manure. That summer it made a fine growth, more than it had for the last five or six years previously.

Two years ago Mr. S. bought some trees here, set them out, and sowed spring wheat among most of them, and planted potatoes among the remainder. In the summer I saw Mr. S., and inquired how his trees were doing; he said those in the wheat were all blighting, leaves turning yellow. Afterwards I saw his little son, and inquired after the trees; he said those in the potato patch looked green and nice; those in the spring wheat did not grow any, and some were dead; he remarked that those we thought were blighted, were found to have the bark gnawed off by the rabbits, and added, "I told father we had better set them all in the potato patch." "Very good advice, young man; I hope you will give your father more of the same sort."

Two men, brothers-in-law, living near each other,

procured trees here last spring, and late in the season one of them remarked, "I planted potatoes among my apple trees, and all grew and did well. George sowed spring wheat in his, and they are nearly all dead, and those that are alive have not grown any."

[We may add to the above, that in a recent conversation on this subject, with S. H. AINSWORTH, of West Bloomfield, one of the best cultivators of Western New-York, he informed us that some years ago, a neighbor nearly seventy years of age, commenced planting a young orchard or fruit garden, and was looked upon by his acquaintances as nearly insane for attempting what *could never benefit him* at his advanced age. He has however given his trees the best cultivation, and some of the cherry trees now measure nine inches in diameter. S. H. Ainsworth has promised to give us the details of this and other similar experiments, as soon as his other engagements will permit, and when received we shall be glad to lay them before our readers. Eds.]

Cure for Mange in Swine, &c.

MESSRS. TUCKER & SON—Having just read in your useful weekly of 19th inst., a "cure for mange in swine," by the use of a solution of corrosive sublimate, which is therein admitted to be 'an active poison,' and highly dangerous, I thought I would give the mode by which I and my neighbors cure our swine of that disease.

I have just cured *five* that became diseased from bedding with *wheat straw*, which is the *third* litter affected in the same way by the same thing. (*En passant*, leaves being the *proper* bedding.) I have washed them thoroughly with strong liquor made by boiling beef or bacon, with or without vegetables—and if one or two applications did not effect a cure, another washing with tobacco water, made by pouring boiling water over a sixpence worth of stems, has always effected a cure. Sometimes I have thrown into the liquor a spoonful of flour of sulphur, and gave a little also in their food. This cure may be relied upon.

By the way, I read in this No. of a case of *prolapsus uteri* in a cow. Last night I lost a valuable Chester sow, weighing three hundred pounds, after farrowing, the uterus having partially passed from her, and remained so for several hours before an effort was made to replace it, which was unsuccessful, owing, I suppose, to the swollen state of the parts and to our ignorance and unskillfulness in the operation. She died in six or eight hours after farrowing. W. Baltimore Co., Md.

Worms in Horses, &c.

MESSRS. EDITORS—A farmer in Co. Gent., March 12, inquires what is the best remedy for worms in horses, &c. I can give a much simpler remedy than the one you copy for him from Dadd's Horse Doctor, and one that I have often tried and never yet known to fail.

Put into the horse's mess, three successive mornings, each time about as much fine cut tobacco as would fill an old-fashioned Dutch pipe.

If a handful of ashes is given every week in a horse's mess, and whenever there is a change in the feed, or a change from hay to grass or vice versa, the horse will rarely if ever be troubled with the bots, or any ailment requiring the administering of Dadd's proscriptio, or most other farrier's nostrums, for the reason that he will not be ailing. I write what I have tried for years. H. Brasher's Falls, N. Y.

NEW FRUITS.—Dr. W. D. BRINCKLE, of Philadelphia, will please accept our thanks for scions of the *Wilmington* and *Catharine Gandette* pears, and of the *Christiana* apple.

The Value of Ashes

MESSRS. EDITORS—A correspondent of the Co. Gent. of Feb. 5, makes inquiry about ashes, leached and unleached, and what soils and crops are most benefitted by them; and as he has alluded to Long Island farmers (which to me has a sound of home,) I have thought to throw out a few facts upon the subject, believing with your correspondent, Mr. JOHNSTON of Geneva, that however beautiful and true a theory may be, yet that the *facts* as developed by practice, are what farmers want to guide them, if *profitable* farming is the thing sought.

To commence our subject, which is the effect of ashes, leached and unleached, upon soils and crops, I shall not attempt to cover all the ground laid down by your correspondent, but simply "state what I know, and testify to what I have seen."

In this section, the eastern part of Long Island, leached ashes have been used to a greater or less extent, by the farmers for at least half a century. The soil varies from a heavy loam, with no perceptible admixture of sand or gravel, to a light loam, in which sand or gravel predominates, but for the most part is what may be called a *good loamy soil*, adapted to the cultivation of all the grains, roots, and grasses.

This land, as I have said, has been ashed more or less for half a century, according as the opinions, and I may perhaps with truth add, the enterprise of its owners prompted. The ashes used have been mostly leached ones, brought by vessels from abroad, at first at a low rate, but as the effects of their use became more apparent and the demand increased, so their price has increased, and now ranges from \$4 to \$5 per ton of thirty-five struck bushels.

(The unleached ashes that have been used during this time, have been limited to a small quantity gathered from the inhabitants of a neighbouring village, and altogether too insignificant in quantity to be worthy of particular notice.)

These ashes before mentioned, the leached, have been brought here from abroad, and together with what few were made by the farmers at home, have been applied to almost every kind of soil and crop here cultivated; but as a general rule applied only once in the rotation. This rotation is generally as follows: First, corn, planted on an inverted sod. Second, oats. Third, wheat or barley, which is succeeded by and remains in grass from three to four years, when corn again follows.

The crop to which it is generally applied, is either to corn by spreading it on the ground after it is plowed, either before or after planting—(the better way is probably immediately after plowing, before the harrowing or dragging has been done,)—or to wheat, and then harrow it in with the seed.

Once in the rotation is as often as is advisable, and three tons, of thirty-five bushels, per acre as much as would be needful to apply, as it is lasting in its effects, and if applied to the corn crop in the rotation mentioned, it will have a marked effect upon all the following crops. Upon lands that have never been ashed, (unless they are sandy soils, of the effect upon which I know but little,) they have had for the first one or two applications a wonderful effect, particularly on grass, wheat and corn—often more than doubling the quantity of the former; and instead of causing the small grains, as wheat, &c., to lodge, as is frequently the case by a liberal application of artificial manures, it has a contrary effect, making a stiff straw, and on this account are useful to apply to crops likely to fall, from the use of forcing manures.

The manner of applying is universally by spreading, as evenly as possible, with a shovel from a cart or wagon, and to do this well requires less theory than practice.

As to the comparative value of leached and unleached ashes I am unable to say, and would suggest to your correspondent that he make a careful experiment, say on wheat, and inform your readers of the result.

In conclusion, I should perhaps say a word as to the ultimate effect of ashes upon the mechanical condition of soils and crops; and as your correspondent has hinted at having heard of lands becoming partially sterile in consequence of too free and constant a use of this manure, I will say that I know of a lot near by me, that has, I should judge from its appearance and what others say about it, been ashed almost to death; at any rate it is now "*hors du combat*," and for a number of years has had the simple treatment sometimes used for old horses—that of turning out to grass, whereby to recuperate perchance its weakened energies, and although it may now be convalescent, yet still will evidently require the sunshine of many a summer, the disintegrating and renewing effects of frost and snow, and the careful dietetic treatment of the skillful cultivator, ere it will again reach the height it once attained. In fact, it would seem to be a field on which the prescriptions of mere theorists might be practiced without any harm whatever. The cause of this I cannot explain; but it is a fact that soils which have been long and freely ashed, seem to have undergone a change in their mechanical condition, and seem more ashlike, and crumble down after the plow, giving unmistakable evidence to a careful observer of having had too much of a good thing.

Corn, planted on land highly ashed for a number of succeeding years, will perhaps grow well and look finely until the month of August, when all at once the stalks will begin to sprawl in every direction, and but half a crop, or barely that, will be the result.

From all this, it will be seen that while leached ashes produce a very marked effect on loamy land to which they have never been applied, yet the effect for good is always less apparent after each application, and should not be followed too long. My own opinion is that two or three applications of say three tons each of unleached ashes, applied once in the rotation as before stated, is enough for at least quite a number of years—perhaps for a man's lifetime. ONE WHO HOLDS THE PLOW. Southampton, L. I.

The Pea-Weevil.

A neighbor raises some very large peas, but a worm gets into the seed, and he wishes to know how to prevent it. It is my opinion that they enter when growing by some insect depositing eggs. Please give your opinion in the Cultivator. WM. PROUDMAN. *Globe Village.*

As we are not furnished with any description of the insect, we infer that it is the Pea-Bruchus or pea-weevil, more commonly known as the "pea bug," which is a small oval beetle, about one-eighth or one-ninth of an inch long, of a rusty black color, with a white spot on the hinder part of the thorax, four or five white dots behind the middle of each wing cover, and a white spot, shaped like the letter T, on the extremity of the body. As soon as the young pea pods are formed, they pierce the exterior and lay an egg opposite to each pea, the puncture for which would not be seen without close observation. The small grub or larva from this egg, bores a round hole and fixes itself in the centre of the pea, but commonly leaves the germ of the future sprout untouched. Hence such bug-eaten peas will generally grow when sown. The grub is changed to the pupa state in autumn, and early the next spring is again transformed into the beetle or perfect insect. The best preventive is to destroy these insects before they make their escape, by scalding the peas, which is done by pouring on them hot water, nearly boiling, and allowing it to remain a minute or less, and is then again poured off.

Potato Culture.

Till within the past twenty years the potato was considered one of our most certain crops. Nothing of their rotting in the field was then known; and but seldom were the leaves and tops injured by curl, rust or mildew; and none of our cultivated crops would yield so good returns under ordinary or slovenly culture. But within the past fifteen years a very marked change has come over the former healthy and productive powers of the potato plant. This change has called forth hundreds of theories, guesses, and conjectures, to account for the potato disease. But after all that has been said and published upon the subject, both in this country and in Europe, there seems to have been but very little actual light thrown upon the cause or prevention of the rot. As to the cause of the disease, we are probably now quite as much in the dark as when it first made its appearance, though some facts, derived from practical observations, seem in a measure to afford us the means of partially guarding against its ravages, even in bad seasons.

In March, 1851, the Legislature of Massachusetts, by a resolution, offered a reward of \$10,000 to any person in that State, "who shall satisfy the Governor and Council, that, by a test of at least five successive years, he has discovered a sure and practical remedy for the Potato Rot."

In consequence of this liberal reward, over one hundred persons communicated their views to the Secretary of that State, many of the writers, doubtless, expecting the reward for their recipes. However, none of the theories proposed were judged "to furnish any perfect cure or preventive of the potato disease." An abstract of these communications was published. Some of them were very lengthy and ably written, the result of much labor and patient research, while others were short and comprehensive, strongly bordering upon the ridiculous. We here give the substance of some of the claimants' theories. Jean Rotilom, Chicago, Ill., goes into the sublime, and believes the disease is "caused by an atmospherical influence of a planet," and "will gradually discontinue in the lapse of five years," (in 1856.) If he is right, "there's a good time coming," and that speedily, to the lovers of good potatoes.

James Riley of Cincinnati, Ohio, writes grandiloquently, but declares that the "paltry reward of \$10,000 would be no inducement to him to make known the cause and remedy of the disease."

Another says, "the weed called Roman wormwood is the sole cause of the potato rot."

But the similarity of views expressed by the most intelligent and experienced writers relating to the nature, cultivation, disease and cure of the potato, is quite remarkable, from which is drawn some apparently sound and rational conclusions, such as that sound, healthy, whole potatoes are recommended for planting—rather than cut ones or small tubers; well drained, light loamy soils, have generally proved more favorable for growing sound crops than wet, heavy, compact soils. Elevated land, far up the side of a hill or mountain, has usually been found a more favorable location for the growth of the potato, than in valleys or low situations which are more subject to fogs, dampness, rust, mildew and early frosts. New lands have been found to contain more of the essential requisites for a large yield and healthy growth of potatoes, than old and long cultivated, or worn-out soils. Good pasture land, plowed in the fall or spring, and planted early, we have found to be the safest kind of soil to grow a sound and good crop upon; such a land with a small spoonful of guano to the hill, has given us a large yield of perfectly sound Chenangoes, a kind usually considered most subject to the rot. Land having a north-

ern slope is thought by some to be better for growing sound, mealy potatoes, than land having a southern exposure. Cool seasons or climates are said to produce the best table potatoes—therefore it is thought the northern slope is best, as it is least exposed to the heating rays of the sun. The addition of a small quantity of plaster, ashes, lime or salt, or a mixture of some of them, in the hill at the time of planting, or strewn over the tops at the first hoeing, sometimes adds much to the quantity and quality of the crop, without increasing its liability to disease; while a free use of strong, rich unfermented manures seems directly to induce disease; producing rank, ill-flavored, unhealthy tubers, unsuitable for culinary purposes.

Orchards on Steep Hill-Sides.

MESSRS. LUTHER TUCKER & SON—I have paid considerable attention to the cultivation of fruit and trees for the last fifteen years. I have planted about 35 acres of apple, pear, and peach. When I plant my peach orchards, I always plant apples in every row and every other tree.

I do not agree with your comment on the article in the March number of the Cultivator, (Hill Side Orchards.) I have about two acres of steep hill side orchard of apple trees, that are doing quite as well as any I have. My manner of cultivating is—from the upper side I plow the first furrow with one horse, and then plow down with two horses to about 5 or 6 feet of the next row. Five or six plowings will form a kind of terrace. The grass and weeds that grow on the strip not cultivated, I mow, and mulch the trees, and draw fresh earth on them from above to keep the mice from harboring. I think trees can be planted considerably closer on a steep hill-side, if it is a southern exposure. I should always recommend to plant fruit trees on the best ground we have, yet I think we can make no better use of steep hill-sides than to plant them with fruit trees. We ought to plant on hill-sides with trees if it were for nothing else but the looks. I think the scenery of the country would look much better if planted and terraced as described.

After the strip is plowed down pretty level, it is a first rate place to raise early vegetables, if it is a southern exposure. There is no part of my farm that gives me more satisfaction than my side-hill orchard, as it is a southern exposure and always well drained. I also have a row of nursery trees planted along each row of apple trees. I can work the trees cheaper and to more satisfaction than I can on the level, as the rows are much further apart.

I have been collecting a great many new seedling apples for the last ten years. I have one which we call the Water Apple. It is the best I have out of several hundred kinds. It is very apt to bear every year—flesh tender, high flavor—size medium—in use from December to March. For further description, see Patent Office Report for 1854.

I forgot to mention above that my side-hill orchard is planted thus * * * * * to make more rows.

I will send grafts of the Water apple to any one that will enclose a few stamps. CHAS. B. OTT. Pleasant Valley Nurseries, Bucks Co., Pa.

PRODUCT OF ONE POTATO.—I planted last summer, one large potato, which I cut into fourteen pieces, placing one in a hill, and from which I dug in the fall half a bushel; one of which weighed 1 lb., and twelve weighed 7½ lbs., and nineteen weighed 12 lbs. About a peck of them very large, and the rest good eatable size. The variety was called the California potato. Before planting I rolled them in plaster of paris. S. H. Stamford, Ct.

Farm-Yard Manure.

There is no subject of greater importance to the ordinary farmer than this, and its late discussion in the *Country Gentleman* has been watched with no common interest. For, after various trials with numerous substitutes in concentrated forms, I have settled down to the conviction that the domestic article from the farm-yard is by far the most reliable.

If, then, this is our main dependence, it is highly necessary that the best mode of managing and applying should be adopted. All mere theory on any subject is unsafe. The mind dwelling long on a cherished idea, often looks through a distorted medium, and takes irrelevant matter for proof. On this account, an agricultural paper that embraces a large correspondence, is much to be preferred. When a dispute upon a point of vital importance arises, the general opinion and result connected with any practical operation in farming is obtained; and from such general opinion and practice only can we arrive at just conclusions.

The custom of *summering* manure (as it was quaintly termed by the late Judge Buel,) has long since been discarded in my practice, as injudicious and wasteful. My *modus operandi*, doubtless, might be much improved, for, as yet, I have no manure sheds or cellars. On this account, as well as others, I am the more strenuous in carrying out my theory; which is, that all the autumnal and winter accumulation in the farm-yards, should be applied in the spring to corn, potatoes, &c., however coarse and unfermented, by spreading it heavily on sward ground for the former, and corn stubble for the latter—turning it in as deep as the plow will well perform the operation. If any is reserved for hills or drills, it is from the hen roost, stercorary, or hog pen. The extreme coarseness of the material we do find to obstruct the plow seriously. The manure of the hog pen is generally composted with wood ashes, in proportion of two of the former to one of the latter. This applied to corn in the hill, when ground has received the treatment above mentioned, rarely ever fails to produce a fine crop. The alkaline property of the ashes, is also nearly a specific against the attacks of grubs and other vermin, while the corn is in its infant state.

Were I situated as some of your correspondents are, too far from large cities or towns readily to procure in the fall season the best material for wheat, I should plant largely in potatoes. This crop, with us, used to be planted on a rotten sward about the middle of June, but the disease compelled us to alter our tactics, and now we plant on corn stubble early in the spring. A long experience has taught me, that more reliance can be placed on ground well manured from the farm-yard in the spring, for a crop of wheat and grass, sown after harvesting the potatoes, without additional manuring, than if the same manure had been carefully kept and applied directly to the wheat in the fall sowing. Another important object is thus attained, viz., the modification of our severe rotation, which is corn, oats, wheat and grass.

In theory it has always appeared reasonable to suppose that the exhalations from farm-yard manure, given off when exposed to the sun's rays, after having been spread broadcast over the field, must seriously diminish its value. The general practice many years ago, in this region, was strictly in accordance with this idea.

A long time since, an old neighbor, who held a contrary opinion, told me that he had repeatedly tried the mode of spreading over the whole field before plowing in, regardless of the solar and atmospheric effect, as contrasted with the common practice, and found it to operate equally as well. His statement induced me to make the same experiment, and after careful inspection, I came to the conclusion that there was no appreciable advantage in keeping manure from the sun by heaping it in the field, or by the extremely inconvenient custom of plowing it immediately under. Since that

period, farmers in this quarter, where immense quantities of stable dung are almost daily arriving throughout the year from the city, spread the entire field before plowing under.

Some remarks of your correspondents seem to convey the idea that wood ashes no longer produce their beneficial effects upon our Long Island soil. I have used them more or less, for the last thirty years, and have not found it to fail in any application yet, but consider it the most reliable for grain or grass of any of this class of manures. In conjunction with farm-yard or city stable manures it is almost unfailing. RICH. M. CONKLIN. *Cold Spring Harbor, L. I.*

Application of Manures.

The discussions on the application of manures in your late numbers, is what I like, and the more the better. I will try to give a little of my experience. I had got a notion that manure must be put upon the fields and buried up immediately, to have it do any good or to save it; but I have learned that many of our notions or preconceived opinions, when put to the test by a fair trial, will not always stand. A few years ago I broke 1½ acres of a corner of meadow, and cultivated two crops on it; in order to smooth it and make it fit for a meadow, I sowed it to wheat in the fall, together with timothy seed, and in the spring I put on a sprinkling of clover seed. After the ground was fitted for the wheat and before sowing, I drew out some rotted manure that I had left in my yard, and covered about half of the piece, well scattered. I did it for experiment. I sowed my wheat on the whole piece and dragged it in. The winter was more open than usual in Onondaga County that year; it was in '53-54, and a great deal of our wheat was winter killed. That part of my field that I manured, was fair, and that not manured was not worth harvesting. It proved the same with the grass and clover seed—the manured part did well—the other did nothing. Now did the manure keep the ground from freezing so hard as to prevent the winter killing, or did the manure give the young plants a healthy and robust root and constitution, so that they withstood the severe winter?

I spent some time last summer in Michigan, Wisconsin, Illinois, and Indiana. I observed that a good many of their apple trees were dead and dying. They told me the winter killed them. I inquired if there was not some method to counteract their winter-killing. The universal reply was—no, except to let the trees alone—not manure or hurry their growth. Now I stuck a pin there, and if I live long I will know whether an apple tree, well manured and taken care of, will winter-kill before one that is let alone. F. B.

Treatment of Dried Apple Seed.

Will you tell how to treat apple seeds that have got pretty dry—never been packed in sand as recommended by Barry? Should they be allowed to *sprout* before planting them? Can they be sown by a seed drill? C. N. B. *Mt. Pleasant, Iowa.*

We have not much experience with dried seed, as we always prefer to keep them in good order, in moderately moist sand or earth. The outer covering becomes hard or horny by drying, and the best way probably, is to pour hot water on small portions of the seed at a time, subject them to freezing and thawing if practicable, and then plant them. In extreme cases, several repetitions of this process may be necessary. Small portions must be selected at a time, so that the hot water may cool quickly, and not destroy the seed, which it will do, if large portions, (as a peck or more) are taken at once.

Wheat in Western New-York.

PROSPECTS OF THE SEASON—HIGHER FARMING REQUIRED—
UNDERDRAINING, FEEDING AND MANURING.

MESSRS. TUCKER & SON—Our wheat crops don't in general look well this spring, especially on our clayish soils. We had such a drought last year from the eighth of July until very recently, that wheat on all clay soils came up very badly, and a good deal of the seed perished and never came up. On loamy soils, or on clay even, where sod land was broken up for fallows, it is much better. A vast number of farmers in Western New-York did not sow wheat last fall after having their land prepared for it, as the midge almost destroyed their last crop, concluding to let their fallows lie over for barley in spring—but I am fully convinced that paying crops of wheat can be raised on all the wheat land if we only give it justice. The truth is, the land is exhausted by over-cropping, and it must either have rest or high manuring. My own wheat crop for the last eight years has averaged as much per acre as it did for any eight years since I owned it, which is now over 35—true, some seasons I had a larger yield than I have had the last eight years, but then for the last eight years I have had no failure except by *wheel* or midge—no freezing out in March, commonly called winter killing. My land being underdrained, and fattening a large number of cattle and sheep, I keep up the fertility of the soil. Hence I get paying crops of wheat.

As a further proof that all that is wanted is a higher grade of farming, I will mention the adjoining farm, (Mr. SWAN'S.) Five years ago he only got about or not over six bushels of wheat to the acre; now, by thorough underdraining, feeding cattle and sheep largely in winter, and thus making rich manure, he has raised the average of his wheat crop to from 25 to nearly 30 bushels per acre, and he has now sixty-six acres in wheat that is certainly the best I have seen—in fact it is as good as could be wished. The reason is, it was thoroughly drained and has all been highly manured with barn-yard manure, within the last four years, and if not too much straw, must be an excellent crop.

One would suppose that making such a renovation of the soil public, would induce many to try the same mode of doing it, even if only on a small scale. A farmer cannot, I think, put his hand to underdraining and look back, so long as he has a wet acre in his possession. But draining won't do all. The land must have manure. I have limed a great deal of my farm, and profitably too. I have sowed a good quantity of salt on my wheat, and in general profitably. The time has gone past for farmers to get good crops unless they manure, and that with manure of good quality. Every bushel or ton of oil cake made in the United States should be fed in it—we now need it as much as they do in England. Beef and mutton are only some two or three cents per pound lower in New-York than in Liverpool, and oftentimes not so much, and why should so many thousand tons of oil cake be shipped from here there? Sure I am that our soil needs it more than theirs. I will soon have fed over 27 tons of oil cake this winter. I have now 530 fat sheep and a few cattle. I have also fed a good deal of corn, and manure made in this way tells where it goes. JOHN JOHNSTON. Near Geneva, 18th March.

Do we need any better answer than is furnished by the above eminently reasonable and practical remarks, to the often urged assumption that farmers in Western New-York will soon be compelled to give up raising wheat at all—except perhaps for the supply of their

own immediate wants? We ourselves will perhaps yield its necessity—unless our correspondent's advice is more widely followed, and farming of a higher grade—such for example as his own and Mr. SWAN'S, substituted for the present too common modes. We cannot expect that a field, neither refreshed by judicious rotation, nor recruited by proper manuring, will continue unfailingly productive, either of wheat, cotton or corn. But to assert the impossibility of supplying its wants anew,—of rendering its vast stores of plant-food unceasingly, if not indeed increasingly, available for many coming generations—is to erect a barrier impassable to man, in agriculture alone of all the arts, and to question the wisdom of Him, who made vegetable life dependent upon the constituents of the soil. Has not England year after year grown wheat, without our hearing the cry that it is there to be sown no longer, on account of diminished productiveness? On the contrary, is not the average crop in that much-cropped island, rather enlarging than otherwise, and are American farmers to give up, without some hesitation and thought, *their* ability to accomplish as much?

We are quite aware of the ready objection that the price of wheat here will not sustain the high farming practiced in Great Britain. But for a mode of rendering wheat culture profitable at its present price, we refer the objector with confidence to Mr. JOHNSTON. He has achieved this end, and his valuable letters, as they have from time to time appeared in our columns, point every despairing wheat-grower to as certain success. Draining and the manufacture of rich manures by feeding, the use of other appropriate fertilizers and the consumption of oil cake, furnish the outlines of his method. Whether his example is to be more widely followed, and whether this indispensable grain is to continue as it has been, the staple of Western New-York, in our opinion rests far more with the intelligence and enterprise of its farmers, than with any superior fate or necessity in the case.

Mr. JOHNSTON deserves the thanks of the Agricultural community, for the entire willingness with which he lays before them the results of his long and rich experience as a farmer, and we can but commend the above communication to that thoughtful regard the importance of its subject so fully deserves. Eds. Co. GENT.

Guano for Corn.

MESSRS. EDITORS—I wish to learn the best mode of applying guano to corn. I wish to use plaster also—whether mixed or not with guano, and the quantity of each per acre. By answering the above inquiries you will much oblige one of your subscribers. D. M. M. Delhi, N. Y.

Probably the greatest benefit from a given quantity of guano, would be from applying it in the hill. The easiest way would be to use Billing's Corn Planter, (for a notice and cut of which see Rural Register for 1857, p. 334,) which may be made to drop any concentrated fertilizer with the corn, and if guano is used, it drops it so as to leave some earth between the seed and grain, thus preserving the seed from the caustic action of the guano. Three and a half bushels of guano and one bushel of plaster, would be an abundant supply—half this would be a fair quantity—and the latter would be at the rate of a spoonful of guano and a teaspoonful of plaster for each hill of corn, three feet and a half each way. The two might be mixed and thus applied together.

If Billing's Planter cannot be had, then mix very thoroughly the guano with five or six times its bulk of dry, pulverized loam, or dried muck, several days before using, and drop half a pint of the mixture into each hill, before planting the corn.

If it is desired to obtain additional benefit from the

guano, sow it broadcast besides; which may be done at about 200 or 300 pounds per acre—and if the soil is heavy, harrow it in; if light, turn it under with a gang-plow, before the corn is planted.

Corn Cooked vs. Uncooked for Hogs.

MESSRS. EDITORS—When we read your remarks on cooking food at the close of the first article in the COUNTRY GENTLEMAN for Feb. 19th, certain recent experiments upon the cooking of corn for hogs, made by Mr. SAMUEL H. CLAY, of Bourbon, Ky., the details and results of which were given to the public in the *Valley Farmer* for December, were recalled to our memory. So far as our memory serves us, you have not put the results of these instructive experiments upon record in your columns, and as they might prove both interesting and useful to many of your readers, confirming and more deeply impressing upon their memories the remark made in the closing sentence of the article referred to, we have condensed these results into the smallest possible compass, (knowing that you like the *multum in parvo* system, or the giving of a great amount of useful information in a small space,) and have added thereto a comparison of these results with others obtained a few years ago by Anderson, Colman, Holbrook, &c.

The closing sentence of the article already referred to reads thus:—"Cooking food for swine, unlike that for cattle, has been found to greatly increase its value." The experiments of Mr. CLAY confirm the truth of these observations, and tend to prove that the feeding of corn raw or whole and uncooked is bad policy or poor economy. The results of Mr. C.'s experiments, confirmed as they are by those of others, show that the grinding of corn into meal and the cooking of the latter will make one bushel of corn produce more pork than two would do, and nearly as much as three would, if fed whole and uncooked.

The results of Mr. CLAY's experiments show that the number of pounds of pork for each bushel of corn was as follows:

When fed in the form of boiled corn.....	14½ lbs.
" " " cooked meal.....	16½ "
" " " dry corn.....	5½ "

They show also, taking corn at the price it often bears or comes to in Kentucky, namely, at 28 cts., per bush., that the expense or cost of each pound of weight gained was as follows:

On dry corn.....	4½ cts. per lb
On boiled corn.....	2 " "
On cooked meal.....	1½ " "

As one fifth should be thrown off from the gross increase to give the nett weight, the above prices will represent the cost of making four-fifths of a pound of pork when corn is 28 cents per bushel. Estimating corn at double the price named, which would be rather under than over the average price of corn of late in any market in the State of New-York, then it is easy to see that making pork on Indian corn, fed whole and uncooked, is an expensive and losing business, since four-fifths of a pound would cost 9 cents, or 1 pound a little over 11 cents. It would be better economy to sell the corn when pork and corn bear such prices as they have usually done of late years, since the corn, without the trouble of feeding and slaughtering the hogs, would bring more than the pork which it would make, that is, if fed whole and uncooked.

Let us see, then, if these results, which show a common mode of fattening swine to be an expensive and wasteful one, are in correspondence with results obtained by others. By reference to sundry records of similar experiments, we find the highest estimate of the amount of pork made by one bushel of corn un-

cooked is about 8 lbs., thus costing about 6 cts. per lb when corn is 50 cts. per bush., or 8 cts. per lb. when corn is 66 cts. per bush., or 10 cts. per lb. when corn is 80 cts. per bushel.

According to the experiments of Colman, Phinney and Holbrook, cooked corn meal, or cob and corn meal will yield from 12 to 16 lbs. of pork for each pound of corn thus consumed.

As the trouble of cooking food for swine is the chief reason why the practice enforced by the results above named may not be adopted as it ought to be, we may state that all the trouble taken by one man who got 15 lbs. of pork for each bushel of corn fed out, was merely to put the meal for the next feeding into a bucket just after the previous one, adding boiling water and slops, and letting it stand in a warm place. This swelled the meal.

Growing Potatoes.

EDS. CULT. AND CO. GENT.—As several of your correspondents have related their manner of tillage, by which they have obtained a good crop of potatoes, I wish to relate my practice, in which I have succeeded in growing a good crop on light land.

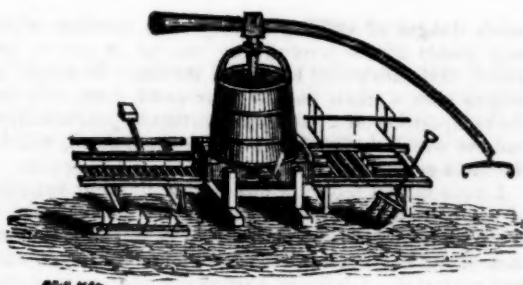
New beginners in this section of Virginia, all experience the want of home-made fertilizers. My system is rather the result of such want than its acknowledged good husbandry. In the first place, I plow deep and harrow, and then make the drills by running the plow each way in the same furrow in order to make it as deep as possible, and then draw my manure, which consists mostly of refuse cornstalks that have been fed to both cattle and horses, and spread in the furrow—drop the seed potatoes and cover. The after culture being the usual practice of cultivating, plowing and hoeing. In speaking to my neighbors of the system I intended to pursue, they said you will fail, as we have tried the practice of manuring in the hill, and although we could grow plenty of vines, yet in harvesting the potatoes were wanting.

After the result of my system of growing potatoes was ascertained, my neighbors said to me, your success was all owing to the fine shower we had just after planting, by which the manure was wet, and being buried deep, it kept moist during the season. Be this as it may, the result was entirely satisfactory, both in quantity and quality, for which I realized over one dollar per bushel.

I perceive there is some controversy in the Cultivator, with regard to the best manner of applying manure, whether in its green or decomposed state. The manure mentioned above, at the time of harvesting potatoes, was just finely decomposed. Query, will it be as advantageous to the after crop as if rotted in the heap? W. ANSLEY. *Fairfax C. H., Va.*

How to Select Mousers.

MESSRS. EDS.—I have tried poisoning rats, but find they soon become very careful what they eat; and I have found that a good cat is the most effectual remedy. As is the case generally, there is only one or two mousers in a litter. I will give a rule which I received from a young German, and which I have seen tried enough to know that it is good, if it is a cat story. A poor cat is about as bad as rats. The German's rule was, when the kittens were old enough to be playful, to catch a mouse, and holding it by the tail, give the kittens a chance to play with it; some would grab at it eagerly, while others would be entirely indifferent. The former he would save, and in this way I have known several who have never failed to obtain good cats. It is very simple, but may be of use to some. ADOLES.



Tile Machine.

The above cut represents the Tile Machine manufactured by Pratt & Brother, at Canandaigua, N. Y.

Proposed Experiments with Salt.

MESSRS. EDITORS—The following "Plan of Experiments" was proposed to the Green Woods, (Winsted, Ct.) Ag. Society, in Feb. last, and recommended for trial to its members. Its publication in your paper may lead to many important experiments the coming season.

PROPOSED EXPERIMENTS.

1. That *winter wheat* or rye receive a top dressing with two quarts salt, four do. lime, four do. gypsum, to eight square rods of ground; to be applied once in five to ten days, or in fair weather, say from the 15th day of April to the 1st of June following. Apply the same amount three to four times. Or, otherwise, take two quarts salt to mix with two bushels of fine compost, equal in strength to barn manure. Apply the same to eight square rods of ground at three or four different times, as before stated.

2. For *spring grain*, oats, &c., apply as before stated, but put on the *whole at one time*, at the time of putting in the crop—i. e., eight quarts of salt to one bushel of lime or gypsum, or marl. Or otherwise, eight quarts salt to eight bushels of compost, to eight square rods of ground. If salt peat or sea-weed be used for compost, less salt will be required in proportion.

3. For flax, sow eight bushels of seed with eight bushels of salt, and use from four to eight cart-loads of barn manure to the acre. Stir the soil thoroughly with the plow and harrow, to mix the whole well together, if you would get from eight to ten thousand pounds of flax to the acre.

4. For corn, put on from the *same to double* the quantity of the same compound proposed for grain, to the eight square rods of ground, and turn it under deep in the soil, or mix it well with the soil by harrowing. Or otherwise, you can put the same compound deep in the hill, with a covering of earth four to eight inches deep between the manure and compost at the time of planting.

It is of the utmost importance that the *tender first root* of corn may not soon reach the manure and be killed, before the strong manure has undergone a *proper change*, or the tender plant has become strong and hardy, by having greatly increased in size as compared to the small tender germ of its early infancy.

5. For potatoes, manure the same as for corn; but use from the same to double the amount, or four times the amount of salt prescribed for corn—to be put in the hill or mixed with the soil far down below the seed—i. e., put the salt in the hill near the surface where the potatoes are dropped, and the other manures below, with some three to five inches of earth between the manure and the tubers. But in sowing salt broadcast a much greater quantity may be used with advantage to the crop, as it will be well mixed with the soil in equal proportions.

6. Also it will be necessary to use three or four times

as much salt for Canada Coburgs and other large varieties, to insure soundness, as it will need in the case of smaller varieties of the same species, to secure the same result. For the want of salt in the soil, not only potatoes, but most if not all other crops, degenerate or prematurely decay.

7. Proceed in a similar manner in raising cabbage, onions and asparagus—with all vines, such as water-melons, citrons, squashes, &c., to which add the root crops, such as beets, carrots, turnips and parsnips, &c. But strawberries in particular are great feeders on salt, and are said to need, like asparagus, little if any other kind of nourishment.

8. To this add deep mulching for all vines, so as to allow their roots to go down deep into the soil, and obtain moisture as well as nourishment far down during the dry season.

The same deep mulching should attend the setting out of all fruit trees. The plum and quince will bear considerable salt, while the apple and peach require less salt. Like the pear tree, some others are very fond of ashes or niter—but both salt and niter are very concentrated fertilizers, and must be used in very small quantities, or be very much reduced in strength before being applied as fertilizers in most cases.

9. Cabbage and asparagus are particular exceptions to this general rule. JAS. C. CLEVELAND. Winsted, Conn.

Drill Sowing vs. Broadcast.

A "Western Inquirer" wishes some information with regard to the best mode of putting in grain, &c. As I have legitimately come into possession of the knowledge he wants by paying well for it, I cheerfully respond to his call.

Drilling is incomparably the best way of putting in wheat. The grain is more equally distributed and better planted. It stands the winter better, and produces more. Beside this more than half a bushel of seed is saved to the acre. The drill I use was made by Kirk, at the Rising Sun, Cecil county, Maryland, and cost about sixty dollars. It measures the ground, distributes the seed in any quantity desired, and covers it very well. Two horses drill about seven acres a day.

A drill of this kind would answer for several small farms, and would pay for itself in a year. At least mine did.

I have used the gang plow for seeding wheat, but the part thus seeded was so much inferior to the rest, which was harrowed in, that I have never used it since. A neighbor of mine who borrowed it and put in some wheat with it, had to lament similar results. T. E. B. Harford Co., Md.

MESSRS. EDITORS—In perusing the columns of your excellent paper, I find a letter of inquiry from a Western Farmer, on sowing grain, whether or no it is better or more profitable to sow broadcast or drill in the seed? As I have had some experience in that direction, and knowing the opinion of a number of sensible farmers in this locality on that point, I propose to pen down our views or opinions before I get out of my chair—as I am comfortably seated by a roasting good fire. So you perceive warm weather has not come with us yet.

We bought Parme's Patent in 1847; (his premium drill;) drilled in about 40 acres that fall. Upon harvesting the crop we found the same ground yielded about 40 per cent. more wheat than it had before in a long time. We continued to drill in our wheat 3 or 4 years till the weevil made its appearance here, always realizing about 40 per cent. more from the same ground than we did when we sowed broadcast.

We have experimented in sowing spring wheat, barley, oats, &c., in this section, but have never discover-

ed as yet any increase in yield by drilling in spring crops; consequently we sow our grain broadcast, and let our drills remain under shelter. We are waiting very patiently for the miserable weevil to take its exit, so we can commence raising wheat; then our drills will come in play again. We can cheerfully recommend farmers to drill in their fall crops, and sow their spring crops with the machine Nature has furnished them with. G. B. C. Yates, N. Y.

Irrigating Meadows.

MESSRS. TUCKER & SON—To answer the question of your Boston subscriber, which you have handed over to me, is no easy task, as he has neither stated the character of his soil nor the nature of the water with which he intends to irrigate.

As I know of no soil which cannot be improved by the use of soft water, I will endeavor to give him some information on the subject. He says: "Now what I wish to know is, how long should I keep the water on, and at what time and how often?"

As soon as the frost is out of the ground, let the water on, and keep it on as long as the weather keeps cool. I regard snow water as most valuable for irrigation, and would turn it on to my meadow, if I could not retain it, even before the frost is out of the ground. When the weather becomes warm and dry, let the water on sparingly, and just at evening, or in cloudy weather, in sufficient quantities only to moisten the soil.

Excessive wet, with hot sun, will not produce the largest quantity nor the best quality, on soil through which water does not leach rapidly; and even in such cases I should doubt the propriety of excessive irrigation, although I am not prepared to say what the effect would be where the subsoil is very porous. The water should never be let on for ten or twelve days before mowing, but it should be turned on as soon after mowing as possible. This treatment, in time, will bring a poor old meadow up, improving it slowly each and every year; and had your subscriber adopted this system thirty years ago, when his meadow was first mowed, and continued it every year, it would now have yielded a heavy burthen.

Your subscriber next asks—"What kind of fertilizer (as he has no barn-yard manure) would produce the most hay at the least cost?"

This is the all-important question, and he who can answer it properly has learned an important secret in practical farming.

Grass being the cheapest renovator for broad-acre farming, he who has a running stream of soft water with sufficient descent to flow forty acres of meadow, can make his farm as rich as he chooses in a few years, by selecting one half acre on the stream, of the finest and best material for feeding grass roots, which in all cases should be as much unlike the soil flowed as possible. By placing a dam around it sufficiently high to raise the water two or three feet upon it, you will have provided yourself with the means of enriching your meadow. Should the half acre selected contain marl, so much the better, and it is quite likely that some species of it will be found in the curves of the stream, where deposits were made long since.

Before you let the water into your pond, plow the ground in the pond deep and fine; then turn in the water about two feet deep, and hitch a span of horses to a heavy cultivator, letting a man ride one of the horses to keep him out of the water; then commence cultivating, and when the water is sufficiently thick, let it run off by means of a gate in your dam, as fast as it can be advantageously distributed over the surface of your meadow, and in the mean time keep your cultivator at work as long as you continue the draft from your pond. As soon as your first plowing is all washed off, and it is sufficiently dry to plow again, continue the same process of flooding your meadow, as there is not

much danger of making a forty acre meadow which only yields fifteen tons of hay, too fat in one or two years, and mark the beneficial results. It might be well to plow a small part of your pond deep, and run the composition on a particular portion of your meadow, and see which material, the surface or subsoil, will do the most good.

I have flowed separate pieces with different varieties of composition, and have found too much difference in results to attempt to explain them in this communication. I will only state what I have found to be by far the best material. I left one-half of my pond—one-fourth of an acre—for two years, until it had accumulated a sod sufficient, when burned, to make three hundred bushels of ashes. These I mixed with the earth by once plowing, which made the mixture about one-twentieth part ashes, and then turned in the water and stirred up the material thoroughly with the cultivator, when I ran it on to about three acres of meadow. This made the best top-dressing I have ever seen.

In warm dry weather, after the grass gets considerable length, I would only recommend letting on the clear water as above.

In five years time, by this process, that poor old worn-out meadow, which now cuts but little more than one-fourth of a ton to the acre, might be made to cut at two mowings, the same season, four tons to the acre; and this I know could be done at a much less expense than any man could draw and spread barn-yard manure, however convenient. A. B. DICKINSON. Hornby.

Earthing up Fruit Trees.

MESSRS EDITORS—I have been obliged, in grading a lot, to place a layer of earth to the depth of 5 or 6 inches around my fruit trees. The trees are about 6 years old, and in a very healthy state. Will you please put me in a way of ascertaining what will be the effect of this earthy deposit on my trees? D. H. McCOR. North Orange, N. J.

The effect will not probably be injurious. We have known *porous gravelly soils* applied to the surface to a depth of two or three feet, where trees 10 or 12 years old grew, without injury. A heavy soil would probably have produced a different result. The depth of application mentioned by our correspondent, would not probably in any case act detrimentally—being different from deep planting, which places the roots down in the hard cold subsoil; while coating the surface leaves all the good soil among the roots, and only operates as a very thick mulch, provided vegetable growth is excluded from it.

Cure for the "Stretches."

MESSRS. TUCKER & SON—Since we have had the care of a flock of Merino sheep, we have, during the winter season, lost some of the best specimens of the flock by this disease; and after using most of the medicines recommended, have thought the disorder incurable. This winter we were induced to make trial of unground mustard seed in connection with castor oil. We gave a tablespoonful of the seed, with a little more than that quantity of oil mixed together, and in an hour or two the animals were chewing their cud, and were soon well. I informed a skillful sheep breeder in this neighborhood, who had at the time two desperate cases on hand. The mustard seed and oil was given with complete success. The disease should be attended to in its first stages; and in order to be able to do this, the person who feeds the flock should remain a while after feeding, to ascertain if any are off their feed, and showing signs of sickness. We communicate this matter to the "Cultivator," thinking it may be opportunely for another winter, if not this. CHARLES COLBY. Meriden, N. H.

Brush Drains.

I see in the Rural Register, reference made to brush drains made by Judge Buel; I wish to know where I will find a plan for constructing such drains. S. P. Mc NEILL. Lone Tree Farm, Wayne Co., Iowa.

We know of no published directions for making brush drains, except imperfectly, in a marginal note on p. 28 of the Cultivator for 1835. As we have successfully employed this mode, a brief description may be useful to some of our readers.

The drain for brush is dug like any other drain, but is best if a foot or more wide. The brush may be cut a few feet in length, and should not be more than an inch or two in diameter. If the branches are straight and nearly parallel, they may be larger and longer than if crooked and spreading—in the latter instance they must be cut quite short, or they will not lie well. Commence always at the upper end, and let the butts rest on the bottom of the drain, with the tops pointing upwards, or from the descent. This position tends constantly to throw the descending water to the bottom or lowest part of the drain. If a sufficient quantity of

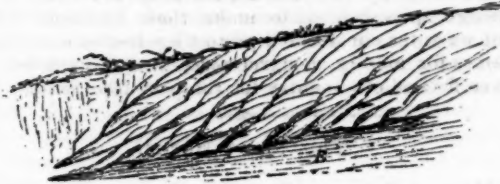


FIG. 1.

brush be laid in, to fill the ditch, fig. 1, it will occupy, after being trodden down and the earth filled in, only about one-third of the ditch, fig. 2. Inverted turf

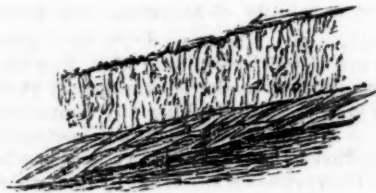


FIG. 2.

forms a good cover for the brush before throwing the earth in. The sides should be nearly perpendicular, or the brush will not settle well.

Where the quantity of water to be drawn off is not large, or where there is a rapid descent, brush drains succeed well; and where there is plenty of brush, are quite cheap. On nearly level land they should not be used. Being nearly excluded from air, the brush will last many years. Some kinds, as for example, cedar, will last much longer than others. But even when quite decayed, there will still be a good channel for the escape of the water, in the many veins left among the decayed branches, the earth having become compact and well settled above, especially in soils of some tenacity.

How to Save Girdled Trees.

EDS. CULT. AND CO. GENT.—Thousands of young fruit trees have been girdled during the past winter in this vicinity, by the mice; and if not attended to in due time must of course lead to a total destruction, while by a very simple process their lives can be saved. My method is, when the sap flows freely in the spring, take a keen knife, run it around the trunk above and below the wound, cutting to the hard wood, and peel the gnawed bark off if any; when that has been done, take another piece of bark, just to fit, and replace it,—

then spread a rag with grafting wax, and bind it so that the water cannot penetrate any part of the wounded trunk. We have many trees which I shall treat in this way this spring. C. R. C. MARTIN. Washington Hollow, N. Y.

Use of Plaster.

Gen. R. HARMON of Wheatland, Monroe Co., in a recent communication to the New-York Chronicle, says that for the last "twenty years no judicious farmer has thought of sowing clover seed, without giving it a dressing of plaster. Clover is not the only crop that requires a dressing of plaster; almost every crop is benefited by being plastered, if the manure is returned to the soil. The application of one hundred pounds of plaster to an acre of grass will, in the average of seasons, give one-third more of grass. If fifteen cents worth of plaster will give one-third more grass, where is the farmer so blind to his interest as not to apply it."

He gives the following directions for applying it:—"Plaster should be sown at the rate of one hundred pounds to the acre, and as early in the spring as the ground is settled so as to admit of going on to it, and on all grain crops as soon as they make the appearance above ground. Potatoes should never be planted without being wet and rolled in plaster. Plaster draws the ammonia from the air and increases the dew on the plant, and retains it much longer on grasses than it would remain were plaster not sown. On clay soils that are somewhat wet, plaster has not been beneficial; on sandy, gravelly, and loam soils, plaster shows its operations to the best advantage."

Spanish Affinities.

Of these, some of our fanciers admit four: the *Minorca*, the *Ancona*, the *Andalusian*, and the *Leghorn* fowls, though the English class the last with the *Andalusian*.

In Baily's Hand-Book of Poultry, he says there are in Devonshire, England, great numbers of degenerate Black Spanish, known by the name of *Minorcas*; and the Poultry Book speaks of them as abundant in Cornwall.

Both sexes have large, deeply serrated falling combs, which, with their wattles, are quite as large as the pure Spanish. Their plumage is entirely black, though somewhat less brilliant than the Spanish; and they also lack the white face of the latter bird, possessing only a white ear-lobe, the face being red. They have shorter legs and are square built, but lack the sprightliness and dignity of bearing that distinguishes the true Spanish; while their weight is about the same.

These birds are said to be excellent layers, rarely showing any disposition to set. In England they are considered less hardy than the Spanish. In this country, this degenerate bird is often sold for the true Spanish, not one in a thousand knowing the difference, though there is almost as much difference in their form and carriage as there is between the stout dray horse and blooded racer.

The *Ancona* fowl is as nearly related to the *Minorca* as first cousin, agreeing with it in general description in almost every particular except color, which is usually a mixture in nearly equal proportions of black and white, but without any regularity. There are also other shades of color, but none of a pleasing character.

The *Ancona* is rarely met with in this country, though we have seen a few.

The *Andalusian* fowl is another relative of the Spanish, possessing the same general character as the two preceding birds, but differing from them in color, its color being a mixture of black and white and gray. They are nearly as tall as the Spanish. Mr. Doyle, in his late work, says this bird is unquestionably a cross of the Spanish with the original domesticated bird of

Spain called the gray Manx. The comb is the same as in the Spanish, that of the cock bird being erect, or nearly so, and evenly serrated, while the hen has a large pendant comb; ear-lobes in both sexes white;



THE LEGHORN FOWL.

cheeks whitish; color, white, black, gray, or mixed. The darkest birds possess the whitest face.

The Poultry Book mentions a Mr. John Taylor, Jr., an English poultry fancier, who has been experimenting with the Andalusian fowl in reference to the production of stock that would throw a uniform colored plumage, and who has been greatly encouraged by his degree of success. Mr. Taylor thus describes his birds: "The following are the points to which I attach most importance: comb large, erect, and evenly serrated; cheek white; legs bluish; plumage bluish-gray or dove-color, each feather being lightly margined with a darker tint. Hackles glossy, velvety, black, falling evenly on each side of the breast, in strong contrast to the color of the latter; tail full, carried very uprightly, with the sickle feather well arched. The hens have the same colors, but pendant combs." At the date of this note, Mr. Taylor admits that his gray birds sometimes bred speckled chickens, caused, as he thinks, from their having been long intermixed in Spain, which causes them to throw back occasionally.

These gray birds are scarce in America, and it is to be hoped will long remain so, as we already have crosses enough without them.

The "Leghorn" fowl is claimed as still another relative of the true Spanish. It is as yet little known here; and as we find no such name in the English Poultry books, we infer that it is either not known there, or if known, is either classed with one of the preceding Spanish affinities, or is considered of so little consequence as to pass unnoticed. So far as our observation extends, the cock birds have large erect combs, which with their large pendant wattles, are bright scarlet; while the hens have very large drooping combs; faces of both red; ear-lobes either red or with a blush-colored border, and a yellowish-white center; color white or black, some of the black cocks having red hackles; bodies rather thick and square; legs somewhat shorter than the Spanish, while the shanks and toes are blue.

In a letter recently received from JOHN GILES, Esq., of Connecticut, and he is certainly a very competent judge, he says that "the Leghorn fowls no doubt approximate nearer than any other fowl to the Black Spanish." Like the Spanish, they are said to be

good layers, and not inclined to sit. Their weight is about the same as the Spanish.

We do not recollect that we ever heard any reason given for calling these birds Leghorn, except that their ancestors may have been shipped from Leghorn, in Italy, or that some one has seen similar fowls there. It is not from the name above that we come to this conclusion, but from the fact that similar fowls are largely bred all along the northern coast of the Mediterranean.

A Mr. Barber, correspondent of the Rev. Mr. Dixon, author of the "Ornamental and Domestic Poultry," says "that he imported choice fowls from Spain in 1846, and also in 1847, and that he obtained some that were pure white, in shape and carriage exactly like the Spanish, only wanting the white cheek-patch;" while one cock that he obtained in 1846 was "entirely black, and long in the legs, but without the white cheek-patch;" others were speckled black and white, longer in the leg than the Polish, "having top-knots, and a tuft of feathers hanging under the throats, and white legs." This gentleman's white fowls, and the black one, if we do not widely mistake, were exact types of these new-fangled "Leghorns," and were called Andalusian in England. We do not wish to repudiate these fowls by any means, for they evidently have enough Spanish blood to make them excellent fowls, but we enter our decided protest against so many new names for merely mongrel sorts, or sub-varieties, as have flooded our country for the past few years.

The Short-Horns.

MESSRS. EDITORS—The Short-Horns, as a distinct breed of cattle, have been held up before the agricultural population of England for more than half a century, and the great superiority that has been always claimed for them is in the fact of their early maturity and their capability of attaining very heavy weights at an early age. I have no doubt that most of your readers are so well acquainted with English Agricultural History as to make it unnecessary that I should take up your space in making any quotations from it. The books are filled with facts and experiments, made, not altogether by breeders whose object was to sell their cattle at high prices for stock, but by men whose business it was to raise beef for market, and who made the experiments to satisfy themselves that the claim for the Short-Horns was a just one; and all their statements go to establish the fact that, while as a breed they are perhaps as good milkers as any other, their point of excellency is early maturity and great aptitude to fatten.

Of the Herefords, I do not personally know much, never having had any experience with them. I have often seen them at the State and County Shows, and always considered them good cattle, though to my eye they are not so handsome, and I have heard it said they were not so quiet as the Short-Horns. If, however, they will attain the weight Mr. SOTHAM mentions in your paper of the 19th inst., at the age of three years, without extra feeding, and very extra feeding at that, they are good enough for any man; and as soon as I am convinced that it can be done, I shall go to raising Herefords, as I am in favor of the animal and the kind of farming that pays best. My private opinion is, however, that Mr. S. will find, when he gets his 3-year-old Hereford steers, raised without forcing, on the scales, that they will fall off just about one-half from the weights he mentions.

After all said and done, Messrs. Editors, we who expect to make our profit by raising *beef for market*, cannot afford to buy either a herd of Short-Horns or Herefords to raise beef from, and what we want to know is, not which animal can be forced to the greatest weight in the shortest time in England, but from

what animal can we here in York State, get a cross with our native cows that will give us the most beef for the amount of food consumed, in the shortest time, with fair attention only. My impression, founded upon my own experience and observation, and backed up by that of many others, is, that the animal we will obtain the most benefit from is a pure-bred Short-Horn. Mr. SOTHAM says Hereford, Mr. CHAPMAN says Devon, somebody else says Alderney; and some other man says there is more in the feed than in the breed, and the Natives are as good as any. Unfortunately we have no carefully conducted and reliable experiments made in this country, to decide the question. Our agricultural journals are filled with opinions and speculations on raising stock, showing that there is a very general desire among farmers to be better informed on the subject.

When we consider the immense numbers of cattle that are raised throughout the country, if it is a fact that from some particular breeds the same weight of beef can be obtained with one year's less keep, the subject resolves itself into one of vast importance in the economy of the country. It is true that to carry on a series of experiments for a number of years, taking a lot of calves and bringing them up until they are ready for the market—keeping a correct account of all the feed, &c., they consume, is prospectively a tedious business. But there would be an excitement and a satisfaction in being able to ascertain the truth in reference to the matter, to say nothing of the advantage the knowledge would be to yourselves and others, that would in some measure compensate for the tedium and the extra labor. It would be a trial in which most farmers would take great interest, could there be instituted a series of experiments, to be carried on fairly and honorably, not for the purpose of building up the character of any particular breed of cattle, but of arriving at the truth as to which of the breeds now offered to the people of York State, will in this State produce the most beef in the shortest time in proportion to the quantity of food consumed. I would therefore propose to Mr. SOTHAM, Mr. CHAPMAN, and any other gentlemen who have herds of Alderneys, Ayrshires or native cattle, that we should each take twelve steer calves, of the first cross between a pure bred animal of the kind we prefer and the native cows—the calves to come from our own herds, or to be bred under our inspection, that we may be certain they are of that cross—that we shall keep a correct account of the milk fed while they are calves, and also a correct account of all feed they may consume other than grass and hay, which each shall feed at option, giving a statement of the character of his farm, and the manner of such feeding—that the animals shall be weighed at least four times per year, the weight and increase to be noted down, and that a report of the state of the experiment shall be made in the COUNTRY GENTLEMAN once a year. I would also propose that they should be divided into four lots of three head each, and fed on the different kinds of feed, roots, &c., thus settling in the same experiment the value of the different kinds of food for certain breeds.

I can get the Short-Horn grade calves from my herd within the year, but not immediately, and if there is any other of your readers who can get them sooner, and will carry on the experiment, I would be pleased to have them do so. If there is no one willing to undertake it, I stand ready. What say the gentlemen? WILLIAM BUSH. *Canisteo, N. Y.*

DRAWING WATER FROM DEEP WELLS.—Will you please say through the Country Gentleman, whose patent of pump you would recommend for farm purposes, combining economy, utility, and durability, for a well 60 feet deep. A. C. HUNT. *Freeport, Ill.* [We intend to furnish within a few weeks a figure and description of a contrivance for drawing water from deep wells, which we think will be just the thing wanted.]

Apples for the West.

In answer to an inquiry, our correspondent, V. ALDRICH, of Bureau county, Illinois, makes the following statement in relation to the most suitable varieties of the apple for that state:

As to the best varieties that are adapted to the west, I think it too soon yet to warrant any one to make a permanent selection. The winter of 1855 upset all former decisions, or to a great extent. Trees that fruited in '55 were injured, and in some cases killed outright, when the same variety for some cause did not fruit that season, went through without being hurt, and so it was with nearly all varieties throughout as far as I can learn—and vice versa. I will name a few varieties that prove hardy here, as well as those most tender. *Hardy*—Early Harvest, Red June or Carolina, Summer Pennock, Early White, Sops of Wine, Am. Summer Pearmain, Fameuse or Snow, Hawley, Maiden's Blush, Fall Wine, Sweet Wine, Domine, Rawle's Janet, Wine Sap, Willow Twig, White Bellflower, Yellow do., Herefordshire Pearmain, Wagener, Sweet Romanite, Swaar, Honey Pippin, N. Y. Pippin, Red Seek-no-further, Michael Henry Pippin and Pennsylvania Vandevere.

Tender—Baldwin, Roxbury Russet, Rambo, R. I. Greening, and Tompkins County King, little more hardy than the three preceding—all others are about alike or nearly so. I have the Roxbury Russet from two different sources; one was badly top killed and the others not any, in winter of 1855. R. I. Greening is too valuable an apple to give up as yet; I have 50 trees in my orchard, but one was hurt much by the winter of 1855, that fruited full the summer of 1855. All those that did not fruit that season were not hurt much to do any harm, although about the same size and age, and standing in the row only 30 feet distant. My orchard contains 570 trees, planted from two to ten years, and I intend to plant from three to four hundred in the spring, viz: 50 R. I. Greening—100 N. Y. Pippin—100 Willow Twig—50 Tompkins County King, and 50 White Bellflower; the balance in specimen varieties.

Apple Tree Borer.

MESSRS. EDITORS—Will you please inform me if tar or paint, applied to young apple trees will injure them—if not, will it be a preventive against the borer fly? O. K. HADWEN. *West Poughkeepsie, N. Y.*

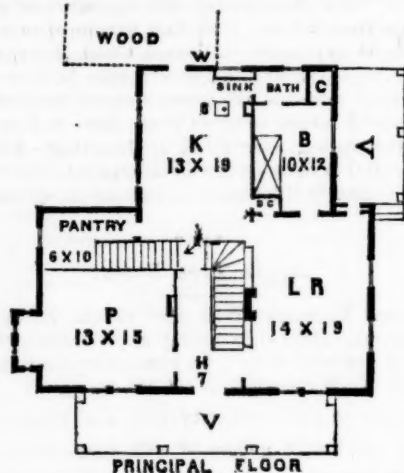
It is said on good authority, that a mixture of a pint of flour sulphur, a gallon of soft soap, and enough strong tobacco water to reduce the whole to the consistence of paint, applied to the trunk and about the roots after the earth has been scraped away, will effectually exclude the borer, if it has not yet attacked the tree. The hot rays of the sun on a coating of tar has caused the death of trees; but we are informed by A. G. HANFORD, a skillful western cultivator, that he has repeatedly applied a coating of tar and linseed-oil very early in the spring to apple trees, without any injury. It soon dries hard, and afterwards cracks as the bark expands, and peels off during summer, carrying with it the bark lice, for whose destruction it was applied. But any oily or greasy substance, which does not dry and crack, and especially if applied during the heat of summer, would prove certain destruction to the tree. The tar and linseed-oil mixture would not probably keep out the borer, as by cracking open it affords an entrance.

One house in Louisville has cleared no less than \$300,000 during the last season in the pork trade; another \$208,000; another \$150,000; and several \$100,000 each. So say the papers.

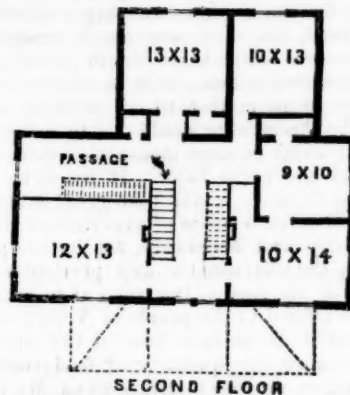


Plan of a House.

We furnish a plan and view of a small two-story brick house, for a country residence. The plan with a few slight alterations, was designed by B. W. STEERS of Adrian, Michigan, and combines many conveniences. We have added a perspective view. The advantages of this plan are: the three rooms most used, are



in direct contact with and easily accessible to each other; the family bed room, (B.) although near the kitchen, (K.) is sufficiently secluded, not opening to the latter; the bath room as should always be the case, opens to the bed room and to the kitchen, at a convenient point for both hot and cold water; the kitchen stove, (marked S.) stands remotely from the pantry and living-room doors, rendering these cooler in summer; the dish closet (D. C.) is accessible to both kitchen and living (or dining) room—to the latter it may be by a mere opening and slide. The cellar is entered from the kitchen beneath the front or hall stairs, and is thus quite accessible to both the kitchen and dining room. The back stairs start at the back end of the hall, and land over the pantry. The garret stairs start from the passage at the head of the back stairs, and the garret is thus reached without passing through the front rooms and hall. "A flue," observes our correspondent, "should ascend into, or up the side of the living room chimney, to ventilate the cellar. The bath-room floor may descend toward the corner next the sink, where the water can pass out, and flow off with that from the sink and well." The cistern



SECOND FLOOR

for rain water is in the cellar, directly under the sink, where it may form a square apartment built of masonry, extending up nearly to the joists and covered with plank. A pump passes up through the floor, and flows into the sink, and a tube with stop-cock may pass through the side wall into the cellar. The well (W.) is just without the kitchen door. The back door of the living room, opens by means of a double door, with a space of air enclosed, on the back veranda (V).

This house is intended to be of brick—and as the prevailing winds in Michigan are west and south-west, it is intended to front the south, which will place the living-room on the sheltered side.

It may probably be built in a plain and substantial manner for a sum not exceeding \$2,200—the cost would vary \$500 with the degree of finish and varying price of materials in different localities. If made of wood, it may be afforded for \$400 less, at the average relative price of brick and lumber.

Setting out Trees.

Having lost several forest trees the first year of setting out, I took the advice of a friend at my side, not a "Country Gentleman," but a city merchant, and from his directions my few trials since have been successful. His plan is as follows: Dig the pit, put in the trees, placing the roots and securing the trees properly—having in a tub earth mixed with water until thin enough to run off, pouring the same upon the roots until well covered up. In a short time the water will leach off, leaving the earth as compact around every little root as it was in the bed from which it was taken. A. C. W.



THE CHRYSANTHEMUM.

How Chinese Cultivate Chrysanthemums.

Our autumn or winter king, the Chrysanthemum, is a great favorite with the Chinese, from whence our supplies originally came. Mr. Fortune's visit to that interesting country brought us many highly useful facts in connection with its vegetation, both as in a state of nature and under the artificial culture of the Chinese gardener. It would seem by Mr. F.'s account that we have something yet to learn in the culture of this flower, before we can come up to the celestials.

The cuttings are struck from the young shoots in the same way as we do here, but when rooted, instead of potting into small pots as we do here, they are potted off at once into the pots they are intended to bloom in, or treated in what we call "the one shift system."

They use a very rich soil for potting, which about Canton is first from the bottoms of lakes and ponds where the *Nelumbium* or water lily grows—being laid up some months to dry and pulverise, when it is mixed with old night soil taken from the manure tanks found in every garden.

A heap of this kind, after being laid up some time and frequently turned over, is in a fit state for potting the Chrysanthemum.

They are also liberally supplied with manure water while growing, its effects being very plainly visible from the luxuriant foliage which covers the plants.

It seems the Chinese are fond of training their plants into all kinds of shapes, as animals, &c., as well as "forming the plants into compact bushes"—the latter the writer tells us, by training them with a single stem, which is forced to send out numerous laterals near its base, these being tied down in a neat and regular manner with pieces of silk thread. As in this country, it flowers during the winter months. E. S.

VERMONT STOCK JOURNAL.—We have received the 2d No. of this new work, just commenced at Middlebury, Vt., by D. C. LINSLEY, author of the History of Morgan Horses. It will be found interesting to all stock-breeders, and especially so to those interested in Morgan horses and Vermont sheep. [See advertisement.] The article in this number on "Doctoring Sick Animals," should have been credited to "Tucker's Annual Register."

How to Raise Turkeys.

MESSRS. EDITORS—Will you allow me, in farmer style, through your Cultivator, to give my experience in raising turkeys, for the benefit of your readers. I commenced raising turkeys about three years ago, but never met with any success until the last season, 1856. The winter previous, I wintered one tom and two hens, and they laid 60 eggs, from which I raised forty-five turkeys from fifty hatched. Until the last summer, I never could raise over one-fourth that were hatched.

My mode of raising them is as follows: I made each hen lay two settings, which they will do without injury if they are well wintered. I set two settings under dung hill fowls, and the remainder under turkey hens. As soon as they are hatched, I have crates provided, and immediately shut them up, and keep them shut up for four weeks; and then let them range any where on the farm. I feed them on Indian meal, and keep buttermilk constantly before them. I throw about half an ounce of asafetida in their milk each day, and this keeps them lively, and they are never bothered with lice. When I let them out, they seem to grow up without any more trouble.

I think there is nothing that will afford our farmers greater profit than turkeys if managed in this way. I think the whole secret of my success lies in the asafetida. My debt and credit stand as follows:

	Dr.
To 3 old turkeys,.....	\$3.00
To 4 bushels corn,.....	3.00
To meal fed young ones,.....	5.00
To 1 lb Asafetida,.....	96
	\$11.96
	Cr.
By 45 turkeys raised and sold at \$1,.....	\$45.00
By 3 old ones,.....	3.00
By 2 bushels manure,.....	3.00
	\$51.00
	11.96

Leaving a net profit of \$39.04
on three turkeys in one year, or \$13.00 profit on each turkey.

If any of your readers can give me any more advice on the subject, I will be thankful for it. JASON H. TUTTLE. Sandyston, N. J.

Inquiries and Answers.

WORK ON EVERGREENS.—Do you know of any work on the propagation and cultivation of Evergreens worthy of confidence. J. FORD. *Princeton, Ind.* [We know of no book exclusively devoted to the propagation and management of evergreens. There is a short article on the subject under the head "*Conifera*" in Johnson's Dictionary of Gardening; and the fourth volume of Loudon's great work, the *Arboretum Britannicum*, is almost wholly devoted to evergreens, and contains minute directions for the management of the different species. On account, however, of the great difference in the heat and humidity of climate, quite different treatment is needed for the young seedlings here, especially in shading them the first year or two. We have no treatise on the American propagation of evergreens, and not until very recently has it been successfully attempted. The best thing would be to take Loudon's directions, and modify them according to the difference of climate, under the guidance of good, common sense, practical knowledge.]

INQUIRY.—Three weeks ago I sold a Devon cow to one of my neighbors. He drove her to his residence, four miles, very carefully, and the fifth day she calved. It being a nice heifer calf, and as he wished to raise it, he allowed it with the cow but once thereafter. He milked her thoroughly three times a day. After a few days he perceived that her milk was still bad, and it remains so until the present time. The milk is decreasing, and the cow will soon go dry. The appearance of the milk is of a dirtish hue, with stringy lumps interspersed, and has been so from the commencement. Can you or any of your readers tell the cause and remedy. He has applied several remedies, and as she is a full-blood Devon, he does not wish to fat her unless obliged. She was a most excellent cow for milk last season. G. BERRY. *Burnt Hills.*

CULTURE OF THE CRANBERRY.—In your paper of 5th March, E. W. McConnell asks the best mode of cultivating the Cranberry. I advise him to procure a treatise upon "*Cranberry Culture*, by B. Eastwood." It contains all the information requisite. The experience of several of my neighbors is, that it cannot be grown successfully on dry upland. No novice should attempt its culture without instruction such as this book gives. ISAAC DILLON. *Zanesville, O.* [Mr. Eastwood's book can be had at this office—price 50 cents—by mail, prepaid, 60 cents.]

ONE HORSE MOWER.—Cannot Mr. KETCHUM or some of our reaper manufacturers get up a one-horse mower and reaper that will work light and handy in our lawns, and for occasional use to reap a small patch of wheat or oats—also to connect a gathering box for short grass on the plan of Swift's lawn mower? This would meet the case of a large number of small farmers. It should cut a swath of at least 3 1-2 feet. S. J. S.

TOWN AG. SOCIETIES.—Will some of your correspondents, who have had experience in the formation of Town Ag. Societies, give us the benefit of their experience through your columns? We are making an effort to organize a joint Town Ag. Society, comprising the towns of Unadilla and Sidney, and we are sensible that some of your correspondents, from their experience in such matters, might furnish us and others, with many useful hints. J. E. S.

EXPENSE OF A BONE MILL.—Thinking from your reply to correspondents in the Country Gentleman of March 12th, in relation thereto, that it might be of interest to some of your readers to know the cost of a good mill for grinding bone, I will give the cost of the one in operation in this city, belonging to Mr. THOMAS COULSON, and which is acknowledged by all who have seen it, to be superior in its operation, at least so far as the quality of the article produced is concerned, to any

in this country. Four pairs of cutters are used. The first two pairs cost, with gearing, \$300—the last two pairs, without gearing, \$600—the necessary belts, elevators, sifters, shafts, pulleys, &c., about \$200. The first set of cutters have done about ninety days labor, ten hours per day, and are now completely "used up;" the second or last set, have not been in operation so long, but are not expected to perform more than one hundred days labor. To the first cost of all, may safely be added 25 per cent. for repairing, breakages, &c., before they are finally thrown aside. The motive power is a ten horse engine, which with building, built and used only for this purpose, cost \$1,500 more. CHARLES BELL. *Albany, March 14, 1857.*

BULL TERRIER.—I can furnish Mr. J. M. Parker with a good bull terrier dog, which has all the qualities of a rat terrier. He has one advantage over other dogs; he will climb a ladder equal to a person, and is a first-rate watch dog. I will warrant him to keep night visitors from intruding. Price \$25. A. VAN RENSSELAER. *Claverack, N. Y.* [The above ought to have appeared as an advertisement; but as others beside Mr. Parker may desire such a dog, we give it a place.]

SEED PLANTER.—I wish you would inform me through the pages of your paper, which is the best seed drill for planting carrot seed. I want something that I can use by hand or horse, that will drop the seed at equal distances from one another. Is there any kind better than Emery's, and what is the price? F. S. *Lansingville.* [We know of nothing better than Emery's, for horse and hand power—price \$14.]

ARTIFICIAL STONE.—Please permit me to inquire of J. E. S., author of "*My Artificial Stone House*," in Co. Gent. no. 8, or any of your correspondents, whether that kind of artificial stone wall will do for cellar walls, or would it require to be cemented? Perhaps he or some one else may have tried it. I think by cementing it on the outside, it would make it as good as stone. J. *Iowa City.*

KEEPING POULTRY.—E. O. H., *Lockport.* You will find in our ANNUAL REGISTER for 1855, plans and descriptions of a Poultry House, which will just answer the purpose. The merits of the different varieties of fowls have been pretty thoroughly discussed in our papers during the past year, to which we must refer you for information on the subject.

FAN MILLS AND STRAW CUTTERS.—Please inform me, through "*The Cultivator*," what is the price of fanning mills in New-York city, or Boston,—also, the cost of good straw cutters for hand power. C. D. *Long Point, Nova Scotia.* [The best fanning mills, vary in price from \$20 to \$27, according to size; straw cutters from \$8 to \$18, for hand power.]

TO PREVENT CROWS FROM PULLING CORN. [Crows will not pull corn if pains are taken to sow broadcast a small quantity over the lot—one half bushel of corn soaked 24 hours, and sowed on 10 acres, will not only save time but preserve the crop. JAMES FULLER. *Whitesides Corners, N. Y.*

DOURAH CORN.—I send you six seeds which I bought of J. M. McCollough for Chinese Sugar Cane. Is it cane seed or some kind of corn? You will please answer in the Country Gentleman. N. Cox. *Quaker Bottom, O.* [The enclosed seed, is, we think, beyond a doubt, that of the Dourah corn—not that of the Chinese Sugar Cane.]

THERMOMETERS.—D. D., *Broylesville, Tenn.* Your best way to get a thermometer, is to order it through some merchant in your county.

HARTLEY & Co.'s CORN PLANTER.—J. T. P. We know nothing of this machine.

PRUNING LARGE GRAPE VINES.—I have an old grape vine nearly three inches in diameter, which has been suffered to go unpruned for several years until the top has become a mass of twisted, dead, and dying vines. A thrifty shoot has started out of the old stock one and a half inches above the surface of the ground, is growing finely, and is now about sixteen feet long. Would it be as safe, or the best plan, to cut off the old stock just above where the young shoot starts out? Please answer through the "Cultivator," and oblige a young farmer. E. R. NEWELL. *Southington, Ct.* [Old and neglected vines of hardy American grapes, may be converted into young, thrifty and productive ones by severe pruning, which should be done early in spring, or before the swelling of the buds. Large vines may be cut off with safety—enough buds, or a smaller vine, being left to spring up. The grape is remarkable for the severity of the pruning it will endure, simply because it has a remarkable power to produce new shoots.]

AG. PAPERS.—INQUIRY.—Most of our farmers say that they cannot afford to take more than one agricultural paper. But many of them do take two or three political papers, that are filled with trash and abuse, &c., that benefits no person or party. I am exceedingly sorry that this is a matter of fact, and I am sure that if they would pay their attention to "book-farming" with the assiduity that they do to political strife, they would possess a much greater practical knowledge of the various branches of good husbandry. If we would acquire the appellation of good farmers, and so pursue the occupation as to make it pleasant and profitable, we must study its theory until we attain a thorough knowledge of all its various branches.

Can you inform me through the "Cultivator," or some of your subscribers, where I could purchase a pair of full blood Wild Turkeys, that are large when they attain their growth? J. G. J. *Elliot Depot, Me.*

BUCKTHORN SEED FOR HEDGES.—Will it answer to plant buckthorn seed in the spring, say May next, on new prairie? We left some parsnips out this last winter, and find them all rotten this spring—also the same with Vegetable Oysters—is that a common occurrence? They were in upland prairie. The past winter has been very cold indeed. C. L. D. *Janesville, Wis.* [If Buckthorn seed have been properly kept, and in moist condition, they will sprout quite early, and planting should not be delayed. They will grow well on prairie land, if kept clean and well cultivated, but not otherwise. Parsnips and vegetable oysters usually keep well in the ground where they grew, during the winter. But when the land is much water soaked, and especially when in addition to this condition, they are subjected to severe freezing with but little snow, or a repetition of freezings, it goes hard with them.]

WANTED.—Can you or some of your correspondents inform me where to get Spring Rye, the price per bushel, and how much to sow on the acre? W. *East Hubbardston, Vt.* [We can but think those who have seed grains for sale miss it very much by not advertising them. We are in constant receipt of such inquiries as the above, and very seldom have the means of replying. Not only are actual inquirers thus numerous, but there are hundreds, who if they saw a list of the standard kinds of seed grain advertised by a reliable house, with full particulars as to price, &c., would then make the discovery that they could use some one or more sorts to decided advantage. Who will be first to take the hint?]

SAW-DUST AND SHAVINGS AS MANURE.—Are saw-dust, turnings, and planing chips, good for any thing as fertilizers? If so, how is the best way to prepare them, and how long a process is it. W. A. W. [Saw-dust and turnings are of but little value as manure—but their value varies with the kind of wood, and the nature of the soil. On light soils, woods which decay soon, operate

nearly as leaf mould. On heavy soils, undecaying woods tend to render the soil looser. Saw-dust, well dried, from quickly decaying wood, answers a good purpose in mixture with manure as an absorbent of liquid.]

CHINESE SUGAR CANE.—There has of late been considerable inquiry as to the quantity of seed it will take to plant an acre, and as I have within a short time been able to inform myself in regard to the subject, I will now present it to the public, hoping that some may be benefitted thereby. To plant an acre 2 by 3 feet apart, and six seeds in a hill, it will take nearly 2 lbs., or 2 qts. and 368 seeds, as there are 10,793 seeds in a pint or 7 ounces of seed. To plant ten seeds in a hill, it will take 3 qts. and 7,842 seeds, or 3 lbs. to the acre. S. H. C.

DOUBLE WHITE SPIRÆA.—Would you inform me through the columns of your paper whether the Double Flowering Spiræa prunifolia is a perennial or biennial; and whether propagated from seed or bulb; also whether I could procure the seed or bulb in Albany. W. E. M. LIVINGSTON. *Utica, Mo., March, 11, 1857.* [It is a small hardy shrub, and may be rapidly propagated by layers, by burying the middle portion of the young newly formed shoots before midsummer. It may be procured of any good nurseryman.]

BUTTER-MAKING.—There are a few questions in regard to butter-making, which I would like to ask you, and receive information through the COUNTRY GENTLEMAN. Which is most profitable, as regards the quantity and quality of the butter, to churn the cream or all the milk? How long should the milk stand in pans before skimming? At what age are cows most profitable for making butter? Answers to these questions from any one who can speak from experience, will oblige A SUBSCRIBER. *Meredith, N. Y.*

ORIGIN OF THE CARTER POTATO.—I notice in the Country Gentleman for the 15th Jan. last, an inquiry as to the history of the Carter potato. If I am not very much mistaken, they were originated by the late Judge McCARTY, of the town of Westerlo, in the county of Albany, some years since. Satisfactory information on this point, may be obtained from BLODGET SHEARS, of Coeymans Hollow. G. W. DURANT. *Rensselaerville.* [We shall be pleased to hear from Mr. Shears on the subject.]

MICE-GIRDLED TREES.—In the Country Gentleman I find an inquiry for a remedy to prevent mice from girdling trees. I will give you my remedy, which so far, I have never known to fail. Remove all grass and weeds from around the trunk or body of the trees, and place leached ashes to the depth of two or three inches around the trees. This will prove a benefit to the growth as well as a preventive from mice-girdling. Who ever knew mice to work in ashes? L. H. *Vernon, Ohio.*

STRETCHES.—I wish to say to you that your remedy for stretches in sheep is an infallible one. I cured upwards of thirty in the winter of '56, by the same remedy, and never lost one taken with it—many of my neighbors losing from ten to forty that I was knowing to. Not one of them, though, could afford or be persuaded to take an agricultural paper. I then resided in Wayne county, Michigan. A. T. C.

WARTS.—I have a very fine mare that has a wart on her leg close to the hoof. It has been cut off, but has grown out. It is very large, and is a running sore. I would take it as a great favor to find out what would cure it. R. W. *Woodford Co., Ky.*

MARKET GARDENING.—B. F. S., *Iowa.* Buist's "Kitchen Gardener," (price 75 cents,) and Schenck's "Gardener's Text Book," (50 cents,) are both good. Your other inquiries we cannot answer.

AMERICAN PLANTS.—MESSRS. EDITORS—Will you please to inform us through the columns of the *Cultivator*, what work gives the most full description of American plants. Botany is a branch of science which should be cultivated by the American farmer to a greater extent than at present it seems to be. I make this inquiry from the fact that I wish to investigate the subject now, as the proper season for the study is at hand. Will you please to state also, where the work can be obtained, and the price. A READER. *New Ross P. O., Mont'y Co., Indiana.*

[The best single work is the new edition of Gray's *Manual of Botany of the Northern United States*, including Virginia, Kentucky, and all east of the Mississippi—a small octavo volume of over 700 pages, with many plates of the ferns and mosses. This volume will be sent postage free to our correspondent, by G. P. Putnam & Co., publishers, 321 Broadway, New-York, on receiving from him two dollars and fifty cents, the price.

Gray's *Introduction to Botany*, with several hundred cuts, a most interesting and valuable treatise, will be sent by the same publishers, for one dollar and fifty cents. Or, the cheaper *Manual*, (without the ferns and mosses) and *First Lessons in Botany*, bound in one volume, for two dollars.]

LIMA BEAN.—MESSRS. EDITORS—Will you or some of your correspondents inform me, through the columns of the "*Cultivator*," if the "Lima Bean" is grown to any extent in the east, by gardeners or others, for "*pickling in the pod*;" and if not much used in this way, in what state are they sold—green or dry, shelled or in the pod, and at what prices? A reply will much oblige A. B. Anna, Ill. [The Lima Bean is much cultivated in the northern and eastern states, on a small scale, for the table—the beans are shelled *when green*, and used only shelled. We have never known it used for pickling. The seed must be sown very early, on very rich warm soil, and the plants be well cultivated, in order to furnish crops, the seasons here being rather short for this bean. The seed is furnished by nearly all seed stores, at moderate prices,—the exact rate we do not remember.]

PRODUCTIVE APPLE TREES.—What kind of apple trees of winter fruit, are the best bearers, in your estimation, and come soonest to bearing, and flourish best in our county, on a dry warm soil? S. W. R. *Greene Co., N. Y.* [For early, and great and continued bearing, the *Baldwin* will probably stand first—five or six-year trees often affording three or four bushels of fruit, and old trees sometimes yielding forty or fifty bushels. Next to the *Baldwin*, stands the *Jonathan*,—a most excellent and very handsome apple, but rather small in size. The *Rhode Island Greening*, and *Tompkins County King*, are also great bearers, but do not give such early crops as the *Baldwin* or *Jonathan*.]

PINE LANDS.—LUTHER TUCKER & SON—To what extent can pine lands that have a substratum of clay be improved, and to what value can such lands be brought to per acre, in a location as favorable to the price of produce as the neighborhood of Albany? I would propound the same questions in respect to other pine lands, which have not the advantage of clay subsoil. I should like to know what is the most direct way to improve such lands, economy and durability to be considered. N. P. A. *Ohio Co., Va., April, 1857.* [We should esteem it a favor if some of our correspondents who have had ample experience, would answer the above.]

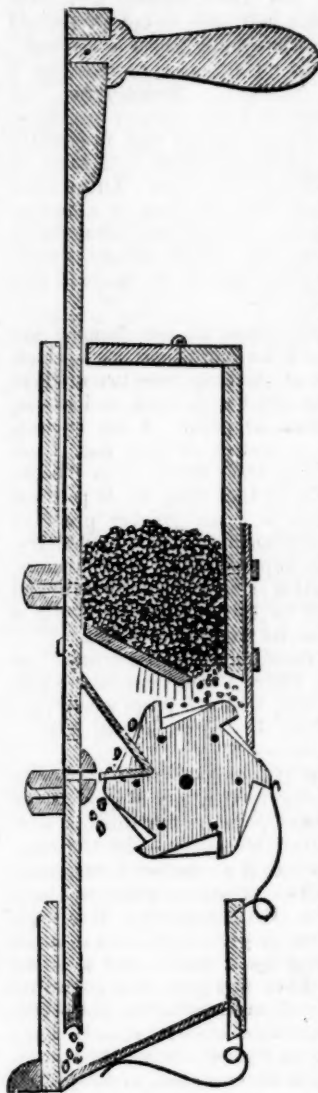
EDS. CULTIVATOR.—I want some information in relation to raising peanuts. Do the blooms have to be covered up or not? Please answer in your next *Cultivator*. R. *Carbondale, Illinois.* [Will some of our correspondents be good enough to reply.]

CANADA CLUB SPRING WHEAT.—J. B. This wheat is not to be had in this city.

New Hand Seed Planter.

PATENTED SEPT. 9, 1856.

In most of the hand corn-planters, the grain is taken from the seed box by means of a float slide, which has



slats or pockets in its surface. In the machine here illustrated, a *many-sided wheel* is employed instead of the slide. The periphery of the wheel is notched at intervals, so as to form pockets, which receive the seed. By the revolution of the wheel, the seed contained in said pockets is discharged, and falls to the lower part of the machine below the plunger, upon a plate that is hinged to the lower end of the machine, which is kept closed except at the moment of planting.

In planting, the operator places in the lower extremity of the instrument upon the ground, and pushes down the plunger by means of its handle. In its downward movement, the plunger opens the plate (on the lower end of the tube,) and forces the seed which had previously fallen into the space

below the extremity of the plunger, into the ground. By lifting on the handle, the plunger is withdrawn and the plate again closes; by stops on the plunger, which work in a slot on the front of the seed tube, it is readily set to plant any desired depth.

The *Scientific American* speaks of the invention as follows: "This planter is extremely simple in all of its parts, durable, and not liable to get out of order. It is adapted to the planting of corn, cotton seed, pumpkin seed, either mixed or not with corn, and to all other kinds of seeds that require to be deposited in hills. The construction of the machine is such that it cannot clog up, no matter what kind of seed is to be planted. It works equally well whether the ground be dry or moist. We regard it as an excellent improvement." For further information address the inventor, HEMAN B. HAMMON, *Bristolville, Trumbull Co., O.*

BEECHWHEAT.—Webster says "Buckwheat (a corruption of Beechwheat,)" and it got its name from the perfect resemblance it has to the beechnut. The German word is Buchweizen, and being an anti *Buck* man I would not call it by its *corrupt* name. Call things by their right names—Rams are now Bucks—Asses, Donkeys, and Cocks, Roosters. W. C. H.

Notes for the Month.

Award of Premiums for 1857.

The time allowed for competition for the prizes offered for subscriptions to our papers, having expired April 10th, we take pleasure in announcing the following awards:

1. I. W. BRIGGS, Wayne Co.,.....	for \$285.86	\$50
2. HIRAM MILLS, Lewis Co.,.....	155.11	45
3. E. BENEDICT, Clinton Co.,.....	96.74	40
4. J. R. HOWARD, Massachusetts,.....	88.76	35
5. J. H. BOYD, Washington Co.,.....	79.75	30
6. GEO. HAMILTON, Nova Scotia,.....	75.00	25
7. JOS. A. HUMPHREYS, Kentucky,.....	59.00	20
8. H. SHEPPARD, New-Jersey,.....	48.98	15
9. SUEL FOSTER, Iowa,.....	48.50	10
10. { J. L. DARLINGTON, Penn.,..... P. STEDMAN, Mass.,..... A. CARY, Montgomery Co.,..... C. F. WEBSTER, Sr., Indiana,..... A. S. MOSS, Chautauque Co.,..... }	Each \$5 in Agricultural Books.	

In addition to the above our offer embraced the following list of Specific Premiums:—

For \$20 sent for Subscriptions to either or both our journals, an extra copy of the COUNTRY GENTLEMAN for one year to the Agent, and any \$1.00 or \$1.25 book on Saxton's List of Agricultural Publications, provided no other Premium be taken.

For \$30—THE COUNTRY GENTLEMAN and Two Dollars in Books, as above, provided no other Premium be taken.

For \$40—THE COUNTRY GENTLEMAN and Three Dollars in Books, as above, with the same proviso.

As in many cases these premiums have been already delivered, and as the list of those entitled to them is so long, we have thought it best in the present crowded state of our columns to omit its publication. Those who have not yet claimed the books to which their remittances entitle them, will please inform us what ones they select, and the volumes shall be immediately furnished. Where they are to go by mail, stamps should be sent to prepay postage, which is generally 12 or 15 cents on a dollar book.

We need not add that we feel personally obliged to all competitors, successful or unsuccessful, for their kind efforts to enlarge and extend the influence of our Journals. We are sure they will be glad to know that our circulation was never in a more satisfactory or thriving condition. We are already looking forward to new exertions for the benefit of our readers, and shall relax no effort to maintain and advance the high character which the COUNTRY GENTLEMAN and THE CULTIVATOR are intended to support. This is especially our care, while that of seeking new readers and subscribers necessarily rests in a great degree with our friends. In thanking them once more for having done so much, we can but express the hope that they will continue zealous in the good work.

U. S. AG. SOCIETY'S EXECUTIVE MEETING AT LOUISVILLE.—At the recent session of the Executive Committee of the U. S. Ag. Society at Louisville, Ky., Hon. James Guthrie, Thomas H. Hunt, J. B. O'Bannon, B. J. Adams, Will. Watkins, and Isaac Everett were appointed to constitute the local committee in connection with Messrs. Gibson Mallory, and Edward D. Hobbs, *ex-officio* members; L. A. Whitely was appointed Assistant Secretary, and Arthur Peter Assistant Treasurer. The exhibition is to commence on Tuesday, September 1st, and continue five days. Extensive improvements have been planned upon the grounds of the South-Western Association, on which it is to be held, comprising additional stables and other requisite buildings. It is unnecessary to add that every Kentuckian will feel a personal interest in the success of the Exhibition, and that no state possesses more energetic, open-hearted and public-spirited friends of the cause of Agriculture.

EXPERIMENTS PROPOSED.—No one interested in the respective merits of different breeds of cattle, and no one who has read the late discussion on the subject in the Co. GENT. can fail to be pleased with the stand taken this week by our correspondent Mr. BUSH. It will be seen that he proposes a trial, which, if carried on as it might easily be, with fairness, care, and very little trouble or expense in proportion to the importance of its results,—would be of more value to the Agricultural community than the mere examination of show-animals could ever be, however carefully their hides were "felt," and their "points" scaled and adjusted. We have never been able to determine how the farmer, who would make his farm the source of livelihood and profit, should undertake himself to maintain a herd of pure-breds, and we have always advised that it be left to breeders, as a business more or less entirely distinct, to supply him with such males as would be best suited to raise the standard of his cattle by degrees, according to his locality and wants. Hence, as we have frequently said, it is of the utmost importance to give each breed a fair hearing, to learn its peculiar merits and demerits, and its power of influencing its progeny; and we should be inclined to anticipate no little good from experiments tending to elicit facts bearing on these points, and to set at rest questions so long mooted for want of them. We hope Mr. B.'s propositions will not remain unaccepted.

THE "HIGHEST-PRICED SALE" ON RECORD.—The following letter from Col. MORRIS is an authoritative announcement of the facts mentioned in our note of last month:—

MESSRS. LUTHER TUCKER & SON,
Editors of "The Country Gentleman."

DEAR SIRS—It is with mingled feelings of *pleasure* and *regret* that I announce that I am no longer a Short-horn breeder. My residence being permanently fixed at Mount Fordham, it was impossible to carry on very pleasantly the occupation at Herdsdale (12 miles distant,) and the only *regret* I feel (independent of my pleasure with the animals) is that I shall disappoint those who wanted a few of them, and lose to a certain extent a continuance of the numerous and pleasant acquaintance which I have formed. Having purchased the entire herd of the late Mr. BECAN, and prepared the manuscript for my Catalogue of 1857, I was solicited by Mr. THORNE of Thornedale, to let him look at it previous to its going to press, which resulted in the highest priced sale ever made in this country or England, *not excepting* those of the Collings and Earl Ducie.

The *pleasure* I feel is that so many valuable strains of blood are now to be united on one farm, and if judiciously managed (which I have no doubt they will be,) more good will be secured to the country at large, by keeping them together for a term of years longer, than if they were now distributed far and wide.

I have wound up my career as a breeder, with a reasonable pecuniary profit, and a synopsis of the sale will be published shortly.

With many thanks for the liberal support of the community for years, and their frequent expressions of confidence in my having done some good, which I hope and believe will be realized, as the seeds or strains of blood of various kinds of animals so diffused, will continue to yield a profitable return to the country, I remain yours, with great respect and esteem, L. G. MORRIS. Mount Fordham, March, 1857.

SALES FROM THE THORNEDALE HERDS.—We learn by a gentleman who was at Thornedale last week, that Mr. THORNE has recently sold nine head of very choice Short-Horns to BRUTUS J. CLAY of Kentucky, Messrs. HAINES of New-Jersey, Mr. E. MARKS of Onondaga county, and Mr. J. R. PAGE of Cayuga county. The prices of these animals varied from \$500 to \$1,500 each.

BLACK HAWK COLT IN MASSACHUSETTS.—We learn from the Massachusetts press, that among many colts there from "Black Hawk, Jr.," owned by JOHN A. HEMINGWAY of Suffield, Conn., one in Chester, Hampden County, Mass., raised by DANIEL B. HOLCOMB, is attracting extensive notice. He was foaled on the 12th May last, and now stands fourteen hands high—girths 60 inches—weighs 720 lbs.—is black as a crow's wing, and

in form and action almost a perfect model. His dam is six years old—a large, racking bay mare of great speed, and weighs 1224 lbs. Mr. Holcomb has had liberal offers for his colt, but refuses anything less than \$1600. Can this colt be beaten? What say you, farmers of Vermont, and the Empire State? w.

MASSACHUSETTS STATE FAIR.—At the recently quarterly meeting of the Massachusetts Board of Agriculture, the committee of arrangements reported progress relative to the preparations for holding a State show and fair in the fall. Col. Wilder, chairman of the aforesaid committee, referred the matter of fixing the place and time to the members at this meeting. After a mutual conference, it was unanimously decided to hold the fair in Boston, provided the Agricultural Grounds—where the National show convened two years ago—can be obtained, and a sufficient guarantee fund can be secured. The time fixed upon is the 20th, 21st, 22d, and 23d days of October.

The following list of officers were appointed by the Board to take charge of and make all necessary arrangements for the exhibition: President—Marshall P. Wilder of Dorchester. Secretary—Charles L. Flint of Boston. Treasurer—Wm. G. Lewis of Framingham. Committee of Arrangements—Marshall P. Wilder of Dorchester; Samuel Chandler of Lexington; John Brooks of Princeton; George Marston of Barnstable; Wm. G. Lewis of Framingham; Moses Newell of West Newbury; Thomas J. Field of Northfield.

NEW-YORK AGRICULTURAL COLLEGE.—At a meeting of the Trustees at the State Agricultural Rooms, March 18th,

Present—Gov. King, Chairman; Hons. Saml. Cheever, President College, Wm. Kelley, J. B. Williams, A. G. Post, Rev. Amos Brown, B. P. Johnson.

After reading and approving the minutes of preceding meeting, Gov. King was re-elected Chairman of the Board of Trustees for the ensuing year.

The following gentlemen were elected additional Trustees:—Rufus K. Delafield, Esq., New-York; E. P. Prentice, Esq., Albany; Maj. M. R. Patrick, Sacketts Harbor; Alexander Thompson, M. D., Aurora, Cayuga Co.; Arad Joy, Esq., Ovid, Seneca Co.; Hon. Addison Gardner, Rochester; Hon. G. W. Patterson, Westfield, Chautauque Co.

The Trustees had before them and examined the several plans submitted for the College buildings, and it is probable a decision will be made within a short time, and the building commenced without delay.

THE NORTHWESTERN FRUIT-GROWERS' ASSOCIATION at their last session, held at Burlington, Iowa, resolved to hold their next session at Milwaukee, Wis., commencing on Tuesday, September 29th, 1857. Owing to the severe weather of the past winter, it is feared that there will be a failure of fruit in that locality, and the President of the Association has given notice that the meeting will be held at Alton, Ill., at the time above mentioned.

STATE FAIRS.—CONNECTICUT is to hold its State Fair for this year at Bridgeport, the inducements offered by its citizens being "\$2,000 in cash, grounds for a race-course, mounted marshals, police," &c. The ILLINOIS State Fair is to be held at Peoria, commencing 21st September.

PENN. STATE AG. SOCIETY.—The Executive Committee of the Penn. State Ag. Society have decided on the 29th and 30th days of September, and the 1st and 2d days of October next as the time for the next annual exhibition. The place is yet to be chosen.

THE IOWA STATE FAIR is to be held this year at Muscatine, Oct. 6.

SALE OF BULLS.—I would notice the sale of the young thorough-bred Short-Horn bull "Sultan." He was bred by FRANCIS M. ROTCH, Esq., of Morris, Otsego

Co., and sold to JOSEPH JULIAND, 2d, of Bainbridge, Chesham Co. The inhabitants of the town of Bainbridge are indebted to the energy and enterprise of Messrs. Juliand and Banks, for securing to their use the services of such pure-bred animals as the Short-Horn "Sultan," and the Devon bull "Metropolitan," now the property of JOHN BANKS, bred and sold by R. H. VAN RENSSELAER of Otsego Co.

DEVONS.—For the encouragement of Devon breeders, I will say that I sold a half brother to Winchester to Pennsylvania, that weighed 1,100 lbs at 19 months, and had not been pushed. He took the first premium at our last State Fair. Messrs. Hurlbut's last importation has produced a marked improvement on the Devons of our state. L. A. BROWN.

OUTRAGEOUS CRUELTY TO ANIMALS.—An instance of criminal and outrageous cruelty to two dumb beasts, occurred on Monday, March 30th. Two sporting characters, Andrew Dalton of Albany, and Samuel H. Taylor of New-York, started from the Exchange, at Albany, at 5 o'clock, A. M., for a hundred mile race, without rest or food, on a wager of \$2,500 a side. Whitesboro, Oneida Co., was the terminus of the course. They both accomplished the race, Taylor's horse in twelve hours and a half, Dalton's being about a quarter of a mile behind. Such cruelty as this is deserving of the severest condemnation—it is brutal and should be frowned upon in any community that is not made up of barbarians.—Exchange.

We are glad to see the uniform terms of disapproval with which the press generally have stigmatized the above. It is one of those "marks of progress" on which some of our sporting papers are fond of congratulating the country as forerunners of an approaching millenium, in which the horse is to rule supreme in society as well as at agricultural shows. It is one of those steps in the "improvement of the horse," which its opponents are so "prejudiced" and "interested" as to disbelieve in and seek to limit. It is one of the first fruits of the love for fast animals, already too rampant among us, but which, as we are told, needs to be still further "educated" through every influence that can be exerted by Fairs and Premiums and rings and matches. It is a result of the "course" and its concomitants, of which it is no defence to say that this happened outside of rule and precedent, for it only occurred in direct obedience to the taste they create and diffuse among us. Could skeptics as to the impropriety of thus degrading and abusing this noble animal, have seen the drunken crowds around our telegraph offices, hazarding their money, as the tidings seemed to favor one side or the other, they might have been convinced that the love of speed does not require the use of our Agricultural organizations to strengthen it, and that the danger which some have foreseen in the attempt, to the character and morals of those witnessing it, may not altogether arise from puritanical scruples, or an intense admiration of short-horns and swine.

THE FARMER: an Agricultural Magazine for New-Brunswick, Nova Scotia and Prince Edward's Island. This is the title of a 16 page monthly, just commenced at St. John, N. B. It is published by Wm. Bellingham, at 75 cents a year. This is, we believe, the first effort to establish an agricultural journal in these Provinces; and if the farmers of these parts of her Majesty's dominions understand their own interests, they will render it a hearty support, which we doubt not, judging from the first number, it will richly deserve. The stock department is to be conducted by our correspondent, Dr. M. A. CUMING, a Veterinary Surgeon of high rank, with a comprehensive knowledge of all matters pertaining to the breeding and rearing of stock.

TRIAL OF MOWERS.—The Skeneateles Farmers' Club—one of the most efficient Town Ag. Societies in the country, give notice that they will have an exhibition and trial of Mowing Machines on or about the first of July, as near the Railroad Depot as circumstances will admit, when every facility will be given to all who

wish to exhibit the qualities of their Machines. Capable and disinterested Judges will be appointed on the day of the exhibition to decide on the merits of the different Mowers. No effort will be spared on the part of the Committee of Arrangements to give the fullest opportunity to all to fairly exhibit the working qualities of their respective Machines. The Committee desire all who wish to exhibit Machines, to give as early a notice of their intentions as soon as possible, so that suitable arrangements can be made for all. Any communications addressed to J. C. Brown, S. P. Rhoades, or W. P. Giles, Skaneateles, N. Y., the Superintending Committee, will receive prompt attention and answers if necessary, and notice of the time of trial will be furnished by mail to all manufacturers who signify an intention of exhibiting.

BOARD FENCE.—A gentleman a few days ago showed me a fence, which, by the aid of frost and water, was pretty well raised up. I told him of a remedy that was given to me by an old and practical farmer, and which I have tried enough myself to know it to be a sure remedy, especially in our wet clay soil. In making a board fence, nail the lower board so that there will be two or three inches between it and the ground; then throw up on each side dirt enough to reach to the bottom of the board, leaving a little trench on each side, which carries off the water sufficiently. There are a great many fences made here, leaving off the bottom board and banking up a foot or more. I prefer the first mode, as an industrious man can do a great many rods in a day, and the latter costs more than the bottom board. *Ad. Union Spa.*

FREY'S PLOW.—I have been to Springfield, to examine Jesse Frey's new Anti-friction Carriage Plow for breaking prairie. With four horses or mules, it is calculated to break three to five acres prairie a day. It runs on four wheels, and the driver sits up on an elevated seat, and drives his horses like a stage team. You can take a friend, or your wife or children around with you, and be quite at ease. With Mr. Hussey's Steam Plow, this will be a great invention for the west. I expect Mr. Frey here this week with one of his plows. *H. H. Tacusah, Ill.*

PRODUCTIVE POTATO.—Last season I planted two potatoes weighing one pound each. I cut them in seventeen pieces—planted four inches deep, *without* manure of any description—dug them after the first frost, and gathered 226 pounds. They are the ordinary kind raised here—a smooth, round red potato. *B. Humboldt Bay, Cal.*

LOUISIANA SUGAR CANE IN ILLINOIS.—The sun shines now, and the plows are going. We have a few acres broken up, and on the 29th of March planted some Louisiana Sugar Cane. It is an experiment, but we may make it a successful one. *H. H. Tacusah, Ill.*

TO INQUIRERS.—Correspondents who write us for information, would do well in all cases, to furnish us their address, as in some cases we could send them a paper containing the information desired, and in others we might prefer to answer by letter.

Those of our friends who are bound "for the West," whether singly or in companies, would do well to read the advertisement of the Illinois Central Railroad Company, who offer great inducements to the purchasers of their lands.

FEEDING AS A SOURCE OF MANURE.—Tell the farmers of Western New-York never to think of guano. Better feed oil cake and corn than buy guano or any other fertilizer. *JOHN JOHNSTON.*

HARD SOAP.—Will I be asking too much to be informed in your paper, the best way of making hard soap? How much grease for a gallon of lye, and how much salt? *N. D. Bathurst, N. B.*



The above is a representation of "Wakefield's Hand Corn Planter," which has been very extensively used in different parts of the country for two or three years past, with so far as we know, entire satisfaction and success. It is very highly recommended by multitudes who have used it, and are we assured that with it one man may easily plant five or six acres of corn per day. C. WAKEFIELD, New-Haven, Conn., is the Patentee and Manufacturer—EMERY BROTHERS are the Agents for this city—price \$5.

Fruit in Western Michigan.

MESSRS. EDITORS.—Do you think the Catawba grape would succeed in 43.2° N. L.? If so, where can the cuttings and plants be obtained? I would mention that the location is highly favorable for so high a latitude, it being five miles from the shore of Lake Michigan, and the soil is a rich, light loam, (sandy.) (1)

Will the low bush cranberry succeed on dry land? (2)

Perhaps I should mention that frosts do not appear here generally until the middle or latter part of October.

The Isabella Grape succeeds well here. Is there any good wine grape that will probably do better in this climate than the Catawba. (3)

Will you have the kindness to indicate what other Horticultural and Agricultural Journal will best suit my wants? (4) *D. G. WEARE, Jr. Pentwater, Mich.*

(1) The Catawba grape would probably ripen well only in the most favored exposures, and in favorable seasons. It could not be relied on for regular well matured crops, so far north. The plants are sold by all established nurserymen.

(2) There is an upland variety advertised by cranberry raisers, said to succeed well on upland, if planted on a soil of peaty character, covered with a few inches of clear sand. We have no experience with them, however.

(3) We have no practical knowledge of wine-making. We are informed that good wine has been made from the Clinton grape, a very hardy and rapidly growing variety, ripening early.

(4) Our correspondent will find the *Prairie Farmer*, published weekly by J. S. Wright of Chicago, and the *Michigan Farmer*, monthly, at Detroit, by R. F. Johnstone, excellent agricultural journals; and the *Horticulturist*, published by R. P. Smith of Philadelphia, in the form of a monthly magazine, an equally excellent horticultural work.

Sheep Feeding—Making Manure.

Having had an opportunity of examining a very superior lot of fat sheep, consisting of 441 head, fed by our correspondent, Mr. JOHN JOHNSTON, near Geneva, at the slaughter-yard of Mr. Roger McGoun of this city, we addressed a note to Mr. Johnston—asking information in relation to the sheep, which were evidently bought in from wool-growers for the purpose of feeding—how long they were fed, the manner of feeding, the profit derived from it, &c., to which Mr. J. promptly replied as follows:

NEAR GENEVA, April 5th, 1857.

MESSRS. L. TUCKER & SON—Your favor of the 2d was received, and I was pleased that you had seen my 441 fat sheep that went to your city, and will endeavor to answer your inquiries about feeding.

My sheep were bought in Sept., Oct. and Nov. I commenced putting them in yards on the 28th of Nov., and fed as follows:—One bushel of oil-cake meal to each 100 sheep, in the morning, and one bushel corn in the evening. The meal weighs 50 lbs. per bushel; of course each sheep had half a pound of cake meal. Corn weighs from 60 to 62 lbs. per bushel, therefore they had over half a pound each of corn per day, with straw for fodder.

I fed this way for forty-nine days, but thinking my sheep were not doing as well as I expected, I discontinued the corn, and gave half a pound of cake meal in its place, and from that time they had one pound of cake meal each, with all the straw from racks they could consume, and large quantities were spread over the yard when needed.

On the 20th Feb. I commenced feeding half my flock excellent clover hay, and in a few days after reduced their allowance of cake meal to half a pound each per day. On the 1st March I put the other half on hay, and in a few days after I reduced their allowance of cake to half a pound each per day, and fed them in that way until 1st of the present month, when I sold them.

You inquire the age and breed. It is difficult to tell the breed of a great many of either men or beasts in this country, they being a mixture from all nations. Fifty of them were a cross from the Merino and South-Down, mostly two-year-olds this spring. They feed very well indeed for their age. I had forty three-year-old sheep, that had a decided dash of the French Merino blood in them; they were large sheep, but rather lean when I got them, but I never saw sheep feed so well. They got very fat indeed. I had a few Leicesters; those in good condition when I got them, did very well; those that were thin when I got them, did not get good fat.

I have yet 59 of my 500 sheep, some 40 or more of which had lambs a month and more. The lambs and dry sheep I shall sell in May or early in June.

By 1st of May, the 500 sheep will have consumed 22 tons and 814 lbs. oil-cake (linseed cake) meal, and 261 bushels corn; and one-half had clover hay thirty-nine days, and the other half, thirty-one days.

I also fed 30 young Leicester sheep; but they are fed by themselves, and not from the same meal.

Sheep were high to purchase last autumn, and I have only got fairly paid for what they consumed.

You request me to estimate the value of the manure made from my sheep. That is always a difficult matter, as I think good manure almost invaluable. For many years after I came here, I applied the manure directly to my wheat at sowing time in Sept. I then considered that the manured land brought me \$10 worth more wheat per acre than the unmanured, and that was when wheat was from 87½ cents to \$1 per bushel. I know I have enough of manure from the sheep to do forty acres if applied to the surface for wheat in the fall. That would make the manure worth \$400 for one

crop; or if I apply it to twenty acres for Indian corn, I may safely calculate on from 15 to 20 bushels more per acre on account of the manure; and then the land would require no more manure for eight or ten years. It is wonderful what effect such manure has on such land. I have been making rich manure for over thirty years; and that is the best Agricultural Chemistry—better than all the doctor's stuff ever invented, to raise either grain or grass, especially if the manure is applied to the surface.

Could not you induce some 500 farmers to make experiments in that way, and give the result through the agricultural papers? I know many that apply their manure to the surface as I do, but they won't write for a paper on any account.

I may mention that I never could succeed in fattening sheep on Indian corn alone and straw. If I fed them enough corn to fat them, a good many died by a rush of blood to the head; they drop down and are instantly dead. I have done well with two-thirds oats and one-third corn, or half corn and half buckwheat, with straw—I mean by measure in both. I have now fed oil cake meal for many years. I commenced when I got it for \$7 per ton. I now pay a little over \$28 per ton. It is excellent for either sheep or cattle, but if I had hay enough should feed corn to sheep when corn was lowest per bushel—and feed only about half a pound per sheep per day. I made many excellent fat sheep twenty-five and thirty years ago, on hay and a bushel of corn to 100 sheep per day. I often at those times, bought from 15 to 40 tons of hay when low, and fed it all besides what I made, to sheep, and I always got paid besides the manure, with the exception of one year, (1842)

I would not advise any man to go largely into fattening stock until he learns gradually by experience, but I would advise him to keep what he does keep much better. It is a perfect disgrace to see the miserably poor sheep and cattle throughout the country? *Where are the agricultural societies?* Yours truly, JOHN JOHNSTON.

It will be seen from the above, that our correspondent finds the profit of feeding to consist mainly in the manure thus obtained. How high an estimate his experience has taught him to place upon profit of this kind, he also tells us, and no one who has made similar trials will accuse him of overrating it. By this means, above all others, are the fertility and productiveness of our soils to be fully maintained, and those of our worn-out and poor lands to be promoted and increased. It may be entered upon by degrees and at little risk while it can scarcely fail in the end to add wonderfully to the pecuniary returns of farming. We hope with Mr. Johnston, that hundreds may be induced for their own sake, to try this kind of "practical Agricultural Chemistry.—EDS.

Quantity of Seed Per Acre.

MESSRS. TUCKER & SON—How shall we ascertain the proper quantity of seed to sow per acre, in order to obtain the greatest yield of grain, except by experiment?

Last spring, having a field of eight acres of very uniform soil, upon which I wished to sow oats, I resolved to try what effect an increased quantity of seed would have upon the crop. Accordingly I sowed upon four acres 2½ bushels, and upon the other four, 3½ bushels per acre. The least quantity of seed gave a yield of 192½ bushels; and the larger, gave 199 bushels, by measure—a trifling difference by weight; the latter exceeded the former two lbs. per bushel, weighing 31 lbs. to 29 lbs. per bushel.

This was upon ground which had not been manured

for the last six years—had raised a crop of barley and one of corn previous to the oats.

The difference in the weight of the crop is something which I cannot account for with satisfaction to my own mind, as the seed was of the same kind—the ground plowed of a uniform depth, and all sowed and harrowed in on the same day. I should be glad to hear the opinion of the "Country Gentleman," or some of his readers, upon the subject. D. C. Lansingville, *Tomp. Co., N. Y.*

The Wheat Crop in Illinois.

The season though late is probably far enough advanced to enable farmers to judge pretty correctly of the state of the wheat crop. The amount of damage done by winter killing, has been largely overrated, and if the crop now on the ground escapes the fly, blight, rust and the worm, to neither of which evils has winter wheat been subject to any considerable extent in Illinois, the yield of 1857 is likely to exceed that of 1856 by 20 or 25 per cent.

Wheat sown on raw prairie and old ground both, and well put in by the 10th of September, though very backward, bears unmistakable signs of health and vigor, in three-fourths of the counties of this State. In the counties lying along and between the Illinois River and the Mississippi, a portion of the State known as "Military Tract," not sufficient rain fell from the 25th of August to late in October to effectually bring up the seed. This was true also of some counties lying along the east bank of the Illinois river, south of the centre of the State. Nevertheless the crop in all this region is by no means less than half an annual average.

In the northern portion of the state, and over the large area lying east of the Illinois River and extending south as far as the line of the Terre Haute and Alton Railroad, the wheat crop promises now to come up to an annual average of five years. The line of the Terre Haute and Alton Railroad runs upon an east and west ridge, that extends pretty nearly across the state. Generally, the black, deep, loamy soil of the middle and northern portions of the state, does not extend south of this line, and the transition from a deep, black mould, to a yellow clayey, calcareous soil, is sudden and marked. South of this line the wheat is in excellent condition, grows better as one goes South, and is very fine in the timbered country south of the Big Muddy River.

I conclude, after comparing notes with gentlemen from different portions of the state, that the area sown for the crop of 1857, exceeds that for the crop of 1856 40 per cent. The increase is indeed immense, and though the probable average yield per acre this year will fall considerably below that of last, the increased breadth sown will yield a crop one quarter larger in 1857 than in 1856.

The success of the wheat crop in Illinois lies almost entirely with the farmer. Deep plowing, early and liberal seeding and good and careful cultivation will insure remunerating returns in every portion of the State, and though the southern part has a soil more naturally adapted to wheat, it is doubtful, taking prices, markets and the facility with which the soil is cultivated into account, whether the northern and central counties do not have the advantage in wheat growing.

I repeat the season is very backward and farmers have scarcely commenced work. We had a fall of five or six inches of snow Sunday the 5th; Monday was as cold as February, last night was a regular winter one, but to-day it is warmer, and now, at 5 o'clock P. M., the snow has nearly disappeared.

Fruit buds in this vicinity (very nearly on the parallel of 40° north, and 129 miles south of Chicago,) have scarcely started, and the prairies are nearly as black as

in February—but we apprehend no damage to fruit or vegetation from the recent unusually cold snap.

South of the Big Muddy river the peach trees were in blossom last week, and the apples trees had begun to bloom, and in this region the fruit crop must have suffered severely. B. F. J. *West Urbana, Champaign Co., Illinois.*

Tartar or Chinese Sheep.

MESSRS. EDITORS—In the March no. of THE CULTIVATOR, there is a notice that I have some of the Tartar sheep. Since that notice I have received several letters of inquiry about them. Perhaps there are others who would like to know of the sheep, and I take this method of giving such information as I have.

They appear to be a very hardy sheep, and also very quiet and peaceable, not having a disposition to ramble. Their wool is rather coarse and strong, the kind used in the manufacture of carpets, horse blankets, &c. Their flesh is said to be superior to any thing in the mutton line, being entirely free from that strong sheepy taste of other varieties. They will compare favorably with the Bakewells for size. They are remarkable for their breeding qualities, breeding twice in the year.

It is not a year since I received them—three ewes and a buck—and I have now seven lambs, and I confidently expect another crop the present month.

Should their mutton prove as good as represented together with their rapid increase, they will prove a valuable acquisition to the country.

As soon as I have any to spare I shall be pleased to supply any who may wish to try them. JOHN HOLMES. *Burnt Hills, N. Y.*

Guano for Oats.

A correspondent of the Country Gentleman recently inquired whether guano would pay on oats, and was told in reply that it would pay in the quantity of 300 lbs. to the acre. Now if this be true in your country, it is very far from being true here. I have large experience in the use of guano on corn, oats, wheat, potatoes, buckwheat, &c., &c., and I feel authorized to give an opinion about it. If by guano your correspondent means Peruvian guano, which is the only kind I recognize as manure, I can assure him that if he shall apply 300 lbs. to the acre, and sow in oats, he will lose his money. His oats will grow up gloriously rank, and fall down, forming a thick mat upon the ground, which will suffocate all the young grass under it. In poor land, 100 lbs. of guano to the acre will bring more oats than three hundred will. In stiff lands, quite poor, perhaps two hundred pounds might not be too much; except on lands too poor to produce fifteen bushels of oats to the acre, I doubt whether guano, at present prices, will pay at all.

My experience of guano has been with the genuine article, unmixed with other manures, except occasionally with plaster of Paris. How many hundreds of pounds of certain kinds might be used with impunity, I cannot pretend to say. It is quite possible that oats might sustain no injury from a ton to the acre of some of the stuff called manure. The genuine Peruvian guano is a certain fertilizer within the limits of its capability. T. E. B. *Falston, Md.*

PROTECTION OF CABBAGE PLANTS.—I have seen somewhere, that to scatter fine corn meal on young cabbages, just as they are coming up through the ground, will feed the ground flea, so as to keep them from eating up all the cabbage, till they get the start of them, and too tough for them to eat. I intend to try it this season. Does any one know of such a case? CYRUS GRAY. *Howard's Lake, Min. Ter.*

Prairie Orchards.

Having noticed a piece in your paper on fruit growing in Illinois, by U. MANLY of Marshall, I beg leave to make a few remarks on the subject. I have been a resident of north-western Illinois for many years, and I must confess that I have despaired of having as good fruit, (I mean apples and peaches) as in the same degree of latitude (41°) farther east, viz., New-York. The cold, piercing winds, on these bleak prairies, are too severe for peaches, and only the more hardy sort of apples. I know of orchards planted 20 years ago on the prairie, which have borne apples only occasionally. When the yellow locust, a hardy tree, is frequently killed by these fierce prairie blasts, it is not strange that our apple trees are also killed. The top limbs of our apple trees being frequently winter-killed, have to be lopped off, and thus the growth of the tree is retarded, and it assumes a dwarfish bushy appearance. Many of our prairie orchards, unprotected by a locust grove, although they seem to be thrifty, fine looking trees, are very poor bearers. On the contrary, those orchards situated in the timber, on a clay soil, are excellent bearing orchards.

The writer of this has a prairie situation, unprotected by a grove, and has been led to think (with your correspondent E. in a former number) that the prairies (of northern Illinois at least) won't be a good fruit-growing country until we learn to protect our prairie orchards by thick sheltering groves of timber.

Southern Illinois, being much more thickly timbered, and the soil in many parts having more clay in it, is of course a much better fruit-growing country than here in the north-west. Mercer County can boast of some noble orchards, but they are mostly situated in the timber districts. Apple, peach, and cherry trees don't seem to bear well on the prairie, or they are not uniformly good bearers, like our timber land orchards.

Last year was a good year for apples, and one of our neighbors, who has a fine old prairie orchard, gathered twelve bushels of apples from fifty trees. W. C. BROWNLEE. North Henderson, Mercer Co., Ill.

Amalgamation of Potatoes.

MESSRS. EDITORS—A gentleman of undoubted integrity, lately informed me that he once planted a row of dark colored potatoes (Negro Toes) between two rows of a white variety, (English Whites.) Upon digging them in the fall, the former variety "came out" unchanged in color, while a large proportion of the latter had "amalgamated" with the former. The shape and flavor of the potatoes were not perceptibly altered, but they were covered with patches and stripes of black—as black as the Negro Toes themselves.

Can you inform us, Messrs. Editors, how to account for the above singular fact? That "it is a fact," can be fully substantiated by reliable testimony.

I had always supposed that "hybridizing can be effected only by the impregnation of the blossom of one variety by the pollen of another," and planting the seed balls thus produced. If the character of different varieties can be changed in the same season, by planting together, it is something new to me. E. L. COY. "Rural Home," West Ilchbron, N. Y.

We have heard of similar results in other cases. If necessary to account for such reported occurrences, without knowing all the circumstances, we might perhaps attribute the result to an inadvertent mixing of seed, or to a simple "freak of nature." A red beet, when quite small (an eighth of an inch in diameter,) was grafted on the root of a white beet, and the united root afterwards grew to about three inches in diameter; yet the two colors remained perfectly distinct; one did not affect the other. If two small growing potatoes could be thus united, the black and white portions would like-

wise probably remain distinct. If the two were simply placed in contact, each with its entire skin, which, as every farmer knows, is water tight, it would be impossible for the sap of one to pass into and discolor the other. But if the two kinds were in separate rows, three feet apart, it appears to us as difficult for the sap to circulate through the three feet of soil from one root into the other, and thus discolor it, as for a white horse to become affected with black streaks by a black horse travelling the adjacent highway. If the occurrence actually should take place, we should be inclined to account for it in some other way, having a knowledge of all the operating causes.

Ashes from Tan.

MESSRS. EDITORS—Can you inform me whether the ashes of tan are less valuable for the bark having been used in tanning? [Probably not.] Are they worth 8 cts. per bushel and hauling 5 miles, over a road where we can only haul 40 bushels at a load, and make two trips per day? W. Baltimore, Md.

Ashes, produced by burning spent tan, are about the same in value as the average of common wood-ashes, with the exception that there is much less potash, and rather more lime. The real value per bushel as a manure, must be determined by the increase of the crop to which they are applied, which varies much with various circumstances. We have known ashes applied to a nursery of young fruit trees to produce no sensible effect; and in another case we have known it to give an increased growth, which amounted to several hundred dollars per acre. A similar variation, but much less in amount, has often resulted from its use on farm crops. From fifteen to twenty-five bushels might be tried on an acre by way of experiment.

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April 23—w&m1t

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Are works which should be in the hands of every one who has a vine to plant or prune. The increased produce of a single year will pay for them.

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April 23—w&m1t

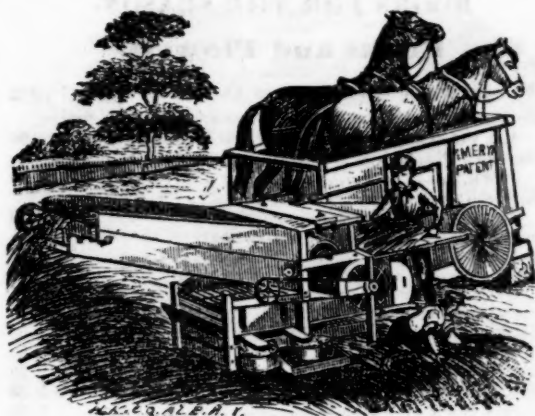
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April 23—w&m1t



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The experience of the proprietors has been more extensive and varied in this branch of mechanism than that of any other firm now in the business of manufacturing agricultural machinery. Their success, as to the satisfactory operation of their numerous machines brought before the public, has been unexampled in this country, either in the number of machines, or their utility.

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dealing in and using the class of implements they manufacture. The public may rest assured the reputation heretofore earned for their machinery, &c., shall be fully sustained, by employing none but the best material and workmanship; and by strict attention to business, they hope to merit and enjoy a continuance of the patronage heretofore so liberally bestowed.

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M. B. KERR, Auctioneer. **THOS. GOULD,**
Ap.23m2tweow4t Aurora, Cayuga Co., N. Y.

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1,000 POUNDS superior pure seed, cheap, in quantities and parcels to plant an acre, with full directions for culture, for \$2.00; and 8,000 seed sent postpaid for \$1.25, and smaller parcels 50 cents. Also King Philip, Darling, and Stowell Corn, Poland Oats, Madder, Sumach, Rhubarb, Earth Almonds, Raspberries—four kinds, and Monthly Roses—12 kinds, in parcels at 25 cents each, and Norway Spruce, Cedar of Lebanon, and 20 other species of Evergreen Trees—50 cents each; all these post-paid. Chinese Imperial White Potato, \$5 for twenty. Lawton Blackberry, \$18 per 100—\$3 per dozen. Priced Catalogues of Trees and Seeds sent to applicants.

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April 23—w&mt*

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April 9—w4tm2t

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- 2 pair young Pea Fowls.
- 2 pair White Turkeys.
- 1 pair African Bantams.
- 2 pair Domesticated Deer, bred in a paddock at Springside.
- 1 four year old Buck, sire of the above.

For further particulars address **C. N. BEMENT,**
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THESE Lands were granted by the Government to aid in the construction of this Road, and are among the richest and most fertile in the world. They extend from north-east and north-west, through the middle of the State, to the extreme south, and include every variety of climate and productions found between those parallels of latitude. The northern portion is chiefly prairie, interspersed with fine groves, and in the middle and southern sections timber predominates, alternating with beautiful prairies and openings.

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The great fertility of these lands, which are a black rich mould from two to five feet deep, and gently rolling,—their contiguity to this Road, by which every facility is furnished for travel and transportation, to the principal markets North, South, East, West, and the economy with which they can be cultivated, render them the most valuable investment that can be found; and present the most favorable opportunity for persons of industrious habits and small means to acquire a comfortable independence in a few years.

Chicago is now the greatest grain market in the world—and the facility and economy with which the products of these lands can be transported to that market, make them much more profitable at the prices asked, than those more remote at government rates,—as the additional cost of transportation is a perpetual tax on the latter, which must be borne by the producer, in the reduced price he receives for his grain, &c.

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The lands remaining unsold are as rich and valuable as those which have been disposed of.

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Land Commissioner of the Ill. Central R. R. Co.
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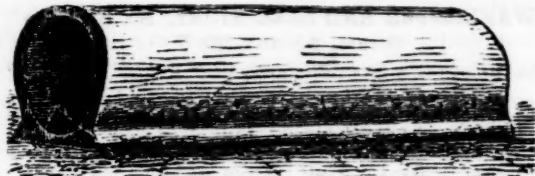
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2 1/2 inches calibre,.....	\$12 per 1000
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March 1, 1857—w&m3m.



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April 9—w3tm3t

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 No. 1 Manipulated Guano,
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 Bone—fine and coarse,
 Poudrette, Plaster, &c
 Field and Garden Seeds.

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Also the little **AMERICAN MOWER** and **REAPER**, the best harvester in the world, at the low price of \$100 as a mower—\$120 as mower and reaper combined. This machine weighs only 450 lbs., and is warranted. For sale by

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The **L. M. Co.** point to their long-standing reputation, and the large capital (\$100,000) invested in their business, as a guarantee that the article they make shall always be of such quality as to command a ready sale.

Price, delivered in the city free of charge and other expense:

One barrel.....	\$2.00
Two barrels.....	3.50
Five barrels.....	8.00
Six barrels.....	9.50

And at the rate of \$1.50 per bbl. for any quantity over six barrels.

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 Jan. 15—w6ow8tm4t Office, 60 Cortlandt-st., New-York.

PERUVIAN GUANO,
Superphosphate of Lime, &c.

THE best quality of Peruvian Guano, with Government weight and brand on each bag, by the cargo or in smaller quantities, at the **LOWEST PRICE**.

SUPERPHOSPHATE OF LIME—Being agent of the largest manufacturers, I can supply a first-rate article at the lowest manufacturer's prices.

BONE-DUST—Coarse and fine ground—also sawings and filings.

POUDRETTE and **TAFEU** by the barrel.

My warehouse is the **LARGEST** depot in the United States for the various kinds of **FERTILIZERS**, all of which are guaranteed of the best and most reliable quality. **AGRICULTURAL AND HORTICULTURAL IMPLEMENTS, FIELD AND GARDEN SEEDS,**

A large and complete assortment of all the improved kinds. **MOWING AND REAPING** Machines.

R. L. ALLEN,

Feb. 26—w6ow&mtf 189 & 191 Water-st., New-York.

COLUMBIAN GUANO,

PERUVIAN GUANO, Government Brand and Weight. Superphosphate of Lime.

Bone Dust.

For sale by

A. LONGETT,

No. 34 Cliff-st., corner of Fulton, New-York.

April 9—w4tm2t

KINDERHOOK NURSERY.

THE Proprietor of this well-known Nursery would inform his friends that he has on hand a large stock of very fine **FRUIT, ORNAMENTAL AND EVERGREEN TREES, ROSES, &c.**, which will be sold at very low prices.

A Catalogue will be sent to any one applying by mail or otherwise.

Also, a large stock of **OSIER WILLOWS**, of the different varieties. Cuttings furnished at very low prices.

Address

JOHN H. CORNING,

March 19—w6tm2t

Valatie, Columbia Co., N. Y.

"Chinese Sugar Cane and Sugar Making."

NOW ready, and sent free of Postage for 25 cents. and for 3 cents additional, enough seed to plant two square rods.

C. M. SEXTON & CO.

Agricultural Book Publishers,

April 9—wltm1t.

140 Fulton-street, New-York.

PERUVIAN GUANO,

In large or small quantities at Lowest Market Price

R. L. ALLEN, 189 & 191 Water-st., New-York.

BEWARE of adulterated or damp Guano, and of all other FERTILIZERS which can be mixed or depreciated without detection. The demand for artificial and commercial fertilizers is now so large in the United States, that it is becoming a great object to adulterate them. This has been done to so considerable an extent in England, as to have called for the most stringent measures for the exposure of rascality, and the protection of farmers.

Feb 26—weow&mtf

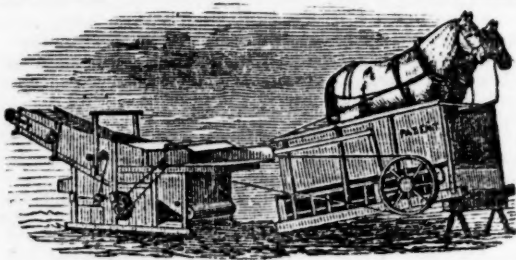
For Sale,

DURHAM YEARLING BULLS AND HEIFERS—also Calves and LEICESTER SHEEP.

RALPH WADE,

Jan. 1, 1857—m6t

Cobourg, C. W.



THE SCHENECTADY AG. WORKS,

Manufacture Improved Railway Horse Powers, Threshers and Separators, Threshers and Winnowers Combined, Clover Hurlers, and Sawing Machines.

THE undersigned having been over twenty years engaged in building Horse Powers and Threshing Machines, feel confident from past experience and the numerous testimonials we are receiving from all parts of the country, of the superiority of our Machines, that we can give satisfaction to all who may favor us with their orders. Our HORSE POWERS are made substantial, and so geared that it requires the team to travel only about 1½ miles per hour, thereby making them suitable to work either horses or cattle on them. Our THRESHERS and THRESHERS AND WINNOWNERS, are so constructed as to discharge all the grain and dust through the Machine, and not into the feeder's face as is usual with other kinds. The Thresher and Winnower has a revolving wire separator, which does the work more perfect than can be done any other way.

The SEPARATOR (riddle) has a fork or straw-shaker, which shakes the grain out of the straw as it passes from the Thresher.

We warrant these Machines to suit the purchaser upon trial, or they can be returned and the money will be refunded.

G. WESTINGHOUSE & CO.,

March 5—woam&m5t

Schenectady, N. Y.

Third Annual Sheep-Shearing

AND EXHIBITION OF STOCK,

WILL be held at the Elgin Spring House, near Vergennes, Vt., on the 10th and 11th of June. There will also be an auction sale of choice stock. The trotting course will be in good order, and premiums will be given on trotting horses and other stock. All are invited to exhibit their stock for premiums and sale.

SOLOMON ALLEN,

March 26—wltm2t

Vergennes, Vt.

King Philip or Brown Corn.

I WILL pack and deliver to the R. R. the above variety of seed corn for \$1.25 per bushel. Address

JAS. W. GRAY,

March 1—m3t

Ball's Pond, Conn.

Frisbee's New Wind Power.

THIS powerful, useful and durable invention is capable of driving any machinery from a common pump to a gang saw-mill, and is an easily managed self-regulator.



The subscriber would respectfully inform those that desire individual rights, that he is now ready to accommodate them with a nice engraving, description and directions for building, which may be obtained (with a deed,) by sending Five Dollars by Mail. Town or County rights may also be obtained cheaper by letter than any other way. I take this method of advertising because I am confident that hundreds will want to be using this very profitable mill before they could be reached by Agents. Those wishing to secure any amount of territory will do well to address a letter to the proprietor, as that

may induce a more speedy call and the first chance with the agent. All orders promptly attended to and recorded

MARCUS FRISBEE,

Ap. 2—w&mt*

Rensselaerville, Albany Co. N. Y.

ALBANY SEED STORE.

Established in 1831.

THE subscriber again offers at wholesale and retail, his annual assortment of genuine GARDEN, FIELD and FLOWER SEEDS, growth of 1856, consisting in part of the following desirable articles:

The NEW NORTHERN CHINESE SUGAR CANE, in packages at 25 cents—by mail 34 cents—also a treatise on the Chinese Sugar Cane: its history, mode of culture, manufacture of the sugar, &c., &c. Price 25 cents—by mail 31 cts.

KING PHILIP or Improved Brown Corn.

NEW CHINESE POTATO—(Dioscorea Batatas) native roots, the lot offered by the subscriber having been raised in the County of Albany. These are fine HEALTHY roots, and offered at \$3 per dozen.

CHUFAS or Earth Almonds, 25 cts. per dozen.

CLEAN STRAWBERRY SEED from choice varieties—\$2 per ounce.

JAPAN and OREGON PEAS—CHRISTINA MUSK MELON (true), 50 cts. per ounce—NEW ORANGE WATERMELON, 25 cts. per package, as also all the most desirable varieties of Water and Muskmelons.

Sweet German Turnip, 12½ cts. per ounce.

Tobacco Seed of varieties—Early Cabbages, Cauliflowers, Broccoli, Tomatoes, Celery, Cucumbers, Egg Plant, Lettuces, Turnips, Peppers, Radishes, and Herb Seeds and Bird Seeds of all sorts.

Garden and Field Peas of all sorts—GARDEN BEANS of all sorts.

SWEET or SUGAR CORN for the Garden—of sorts, viz: Darling's Extra Early, Early Sweet, Early California, Gigantic Constantinople, (very large and fine,) Mammoth Sugar or Large Late, Stowell's Evergreen and Old Colony.

White and Yellow INDIAN CORN of the finest sorts for the Field.

MILLET SEED, Shaker Long-brush Broom Corn, Lucerne or French Clover, White Dutch Clover, Red Clover and Timothy, Red-Top or Herd's Grass, Orchard Grass and Mixed Grass Seeds for Lawns, English Rye Grass, Spring Vetches or Tares, Sun Flowers.

Best Improved Ruta Bagas and other Turnips—Long Orange, Large White and other Carrots—Large Red and Yellow Globe Mangel Wurtzel—White French and Yellow German Sugar Beet—Honey Locust, Buckthorn and Osage Orange for live fences—Yellow Locust for timber and Locust posts, with a large assortment of choice Flower Seeds, of which a package of 20 choice named varieties will be sent by mail for \$1, AND POSTAGE PAID.

Spring planting bulbs, consisting of Amaryllis Formosissima, (Jacobean Lilies,) Gladiolus Floribundus, Gandavensis, and Psittacinnus, Mexican Tiger Flower, Red and Yellow—Tuberose, and Madeira Vines. Double Dahlias of the choicest named varieties at \$3 per dozen. The best books on Poultry, Kitchen Gardening, Cultivation of Fruit Trees and Flower.

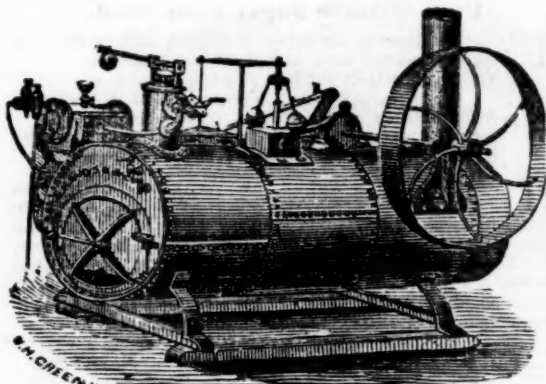
Orders by mail (be they ever so small) promptly attended to, and Catalogues of my whole collection forwarded by mail, free of charge, to applicants.

WILLIAM THORBURN, Seedsman, &c.,

492 Broadway, Albany, N. Y.

Small packages of Seeds carefully enveloped and safely forwarded by mail.

March 19—wltm2t



PORTABLE STEAM ENGINES, For Farm and Mechanical Purposes.

A. N. WOOD & CO., Eaton, Madison Co., N. Y., are building, and keep on hand Portable Engines of different sizes, on Trucks or without.

PRESENT LIST OF PRICES.			Weight
2½ horse power,	\$225	1500	
3 do	\$275	1800	
4 do	\$340	2000	
6 do	\$520	3500	
8 do	\$680	4500	
10 do	\$850	6000	

Trucks with cast iron wheels, from \$20 to \$50 extra, ready to hitch the team on.

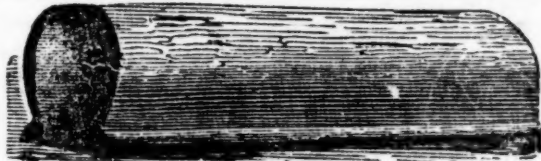
Circulars can be had by addressing us as above.

Jan 31-wtf-May 22-mtf A. N. WOOD & CO.

A FARM FOR SALE.

FOR SALE, at \$55 per acre, a farm of about 135 acres, of which over 30 are well timbered, situated in the town of Camillus, Onondaga Co., 2 miles from Camillus Village, on the Central R. R. 6 miles from Syracuse, and a short distance from the Erie Canal. Churches and mills of all kinds near at hand. Excellent markets for all kinds of farm produce, within a short distance. For further particulars as to terms of payment, &c., address the subscriber at Belle Isle P. O., Onondaga Co., N. Y., or call upon him on the premises, or in his absence upon JONATHAN WHITE, Belle Isle. HAROLD M. WHITE.

March 12-weow&m2mos.



Appleton's Drain Tile Works, Corner of Lydius and Snipe streets, Albany, near Mr. Willson's Nursery.

HORSE SHOE TILE 14 INCHES LONG.
PRICES—4½ inches calibre, \$18 per 1000 pieces—3½ inch, \$15 per 1000—2½ inches, \$12 per 1000.
SOLE TILE 14 INCHES LONG.
4 inches calibre, \$40 per 1000—3 inches, \$18 per 1000—2 inches, \$12 per 1000.

THE subscriber having enlarged his works, is now prepared to furnish Drain Tile of the various patterns and prices. Also large Tile for small streams and drains about dwellings, &c., at \$4 \$6, and \$8 per 100 pieces. He warrants his Tile to be perfectly sound, and to fit good at the joints, so as to admit water and keep out the dirt. The Tile have a larger calibre than any other of American manufacture for the same prices; they are also more than 14 inches in length—1000 pieces will lay 72 rods.

Tile delivered at the docks and railroads free of cartage. Specimens can be seen at L. & M. Merchants', 71 Quay-st., Albany, near the Steamboat Landing.

Full directions for laying Tile will be sent free to those addressing the subscriber.

He would only add that Tile from his establishment obtained the first prizes at the Albany county and N. Y. State Fairs. Practical drainers furnished if required.

Orders from all parts will be thankfully received and promptly attended to. Address JOHN APPLETON.

195 Washington-st., Albany, N. Y.

March 26-weow&m3m.

THE CONCORD GRAPE.

THE originator of this new grape offers for sale a fine stock raised from the parent vine. It has fully sustained its reputation as

The Best Grape for Out-door Culture,

having survived the two last severe winters unharmed, when the Isabella, Catawba, and other grapes were killed to the ground.

For SIZE, BEAUTY, QUALITY and BEARING, it is unsurpassed. It is perfectly hardy, and has never been affected by rot or mildew, while it ripens three to four weeks before the Isabella and two weeks before the Diana, in the garden of the proprietor.

"We tested at our late State Fair, several specimens of this new Eastern Grape, and were agreeably disappointed in it. The berries are from a fourth to a third larger than either the Isabella or Catawba; the bunches are larger and heavier; the vine is far hardier than any other of Northern origin; and the fruit ripens from three weeks to a month earlier."—[HORACE GREELEY, New-York Tribune, Oct., 1854.]

"We have received from E. W. Bull, of Concord, a fine specimen of the Concord Grape. This new seedling is attracting much attention among horticulturists, and deservedly. It is a large and handsomely clustered grape, and the flavor of the specimens we have tasted is superior to that of the Isabella."—[Boston Journal, Sept., 1854.]

"I regret the Grapes I received from you did not keep longer. They gave the utmost satisfaction, and every good judge of fruit said they were DECIDEDLY BETTER THAN THE ISABELLA."—[J. D. INGERSOLL, Ilion, N. Y., Oct., 1854.]

"The most beautiful" of the new hardy grapes "is undoubtedly the Concord."—[J. F. ALLEN, Report Mass. Hort. Soc. 1854.]

The testimony in favor of this Grape is certainly very full and from well-known horticulturists. It may be pronounced large, handsome, and excellent.—[Horticulturist, Dec., 1855.]

Opinions of the Massachusetts Horticultural Society:
1852, Sept.—"Seedling grape from Mr. Bull, large, handsome and excellent."

1853, Sept.—"Fully equal to specimens last year, and proves to be a remarkably early, handsome, and very superior grape."

Fine strong plants for sale at \$1.50 each—\$12 per dozen. Two years old, \$2 each—\$18 per dozen. Extra three years, \$3 each. A LIBERAL DISCOUNT to clubs and the trade.

Address E. W. BULL,

March 19-w&mtf

Concord, Mass.

C. S. WAINWRIGHT'S

First Public Sale of Thorough-bred North Devon Cattle, to be held at "THE MEADOWS" on the 17th day of June, 1857.

THE subscriber intends holding his first Public Auction of North Devon Cattle on the above-named day, at his residence, "The Meadows," four miles north of Rhinebeck Station on the Hudson River R. R. The animals to be sold will number between 20 and 25 head, males and females, from calves to full grown; all of which have been either bred or imported by himself, and have perfect herdbook pedigrees. As a lot, he believes he may say with truth, they are fully equal to any ever yet offered to the farmers of the U. S. Among the number will be the imported bull May-Boy, (71,) and the imported cows Nonpareille, (924,) and Moss-Rose (904.)

Catalogues containing full pedigrees and all necessary information, will be ready on the 15th of April, and will be sent to all desiring it. The subscriber will be happy to have gentlemen visit his herd at any time.

ALL the sales will be *EX A MERE*; and no animal on the Catalogue will be disposed of UNTIL the AUCTION.

C. S. WAINWRIGHT,

Ap. 9-w10tm2t "The Meadows," near Rhinebeck, N. Y.

HAY PRESSES.

DERICK'S CELEBRATED PARALLEL LEVER Portable and Stationary HAY PRESSES, patented May 16th and June 6th, 1854—which (at about the same cost of transportation as a Railroad Horse Power and Thresher,) are now being forwarded to all parts of the country, and are in every case giving the most decided satisfaction; which (with two men and a horse) are warranted to bale from six to nine tons of hay per day, according to the No. or size of the press—and which are sold for from \$100 to 175. For circulars, with full explanatory engravings, and numerous first-class references, apply personally or by mail to WILLIAM DEERING & CO., Dec. 11-weow&mtf Manufacturers, Albany, N. Y.

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STRAWBERRIES.

PARDEE'S Manual for the Culture of the Strawberry will ensure success, and recommend the best varieties for the different soils and locations. Price, 60 cents. Sent by mail, postage free, on receipt of price.

C. M. SEXTON & CO.,

Agricultural Book Publishers,

April 23—w&m1t

140 Fulton-st., New-York.

Superior Suffolk Swine.

THE subscribers have for sale pure Suffolk Swine, bred from their best imported Suffolk stock.

Address JOSIAH STICKNEY, Watertown, Mass.

Or ISAAC STICKNEY, Boston, Mass.

April 23—wewo4t—and lam4t.

Pure Chinese Sugar Cane Seed.

THE subscriber is prepared to supply orders for this Seed, warranted pure, at 75 cts. per pound.
GEO. H. SHEPPARD, Horticultural and Seed Agency, 159 Front Street, New-York.
April 30—w2mt1t.

Northern Sugar Cane Seed.

HAVING purchased from Mr. Wray his importation of Chinese Imphee or Sorgho Seed, grown in France under his own immediate inspection (thereby insuring the utmost purity,) and described editorially by Mr. Greeley, in "The Tribune," we offer it for sale in quantities at **One Dollar a Pound**, and in packets, prepaid by mail, at 25 cents, 50 cents, and \$1 each. This seed, so superior to any other in market, can be procured **ONLY** from

J. M. THORBURN & CO.,

Ap. 23—m1tw4t

15 John-st., New-York.

Agricultural Seeds.

THE subscribers offer the following seasonable seeds, the growth of last year, and of unsurpassed qualities. Dealers and others requiring large quantities, will be served at prices considerably below the rates quoted.

Best quality Red Top Turnip,.....	75 cts per lb.
Red Top Strap Leaf, do.,.....	75 do do
Large White English Globe, do.,.....	50 do do
do do Norfolk, do.,.....	50 do do
Long White Tankard, do.,.....	75 do do
Yellow Stone, do.,.....	75 do do
Yellow Aberdeen, do.,.....	75 do do
Best American Improved Ruta Baga, do.,.....	75 do do
Imported do do do,.....	50 do do
Imported Purple Top, do.,.....	50 do do
and 12 other fine varieties of Turnips, from	50 to 75 cents.
Early Scarlet Horn Carrot,.....	\$1 00 do
Improved Long Orange, do.,.....	1 00 do
Long White, do.,.....	75 do do
White Sugar Beet,.....	50 do do
Yellow, do.,.....	50 do do
Long Red Mangel Wurzel, do.,.....	50 do do
Fine Mixed French Grass Seed for Lawns,.....	\$5 per bush.
And other mixtures for Lawns,.....	3 and 4 do.

Also the finest qualities of Red, White, Dutch, Lucerne and other Clovers—Timothy Seed, Red Top, Blue Grass, English and Italian Rye Grasses, Orchard—Sweet Scented Vernal—the Fescues and other Grasses, with a large and complete assortment of **VEGETABLE, FLOWER AND FIELD SEEDS** of the best qualities, at reasonable rates.

Catalogues on application.

JAMES M. THORBURN & CO.,

15 John Street, New-York.

April 23—w4tm2t.

FOR SALE,

A MORGAN STALLION, 4 years old last May, 15½ hands high, weight near 1,100 lbs. His dam was sired by the Judson Hamiltonian—the Judson horse by the old Hamiltonian, owned by Isaac Bishop of Granville, N. Y.; his color bright bay. Action Morgan.

JOHN S. PETTIBONE,

April 2—w6tm1t*

Manchester, Vt.

Please to Read This.

IF YOU WANT EMPLOYMENT, send at once for Mr. SEARS' CIRCULARS TO BOOK AGENTS. Our publications are considered among the most saleable. Address (post-paid) **ROBERT SEARS, Publisher,**

March 19—w6tm6t

No. 181 William-st., New-York.

Guano and other Fertilizers.

GENUINE No. 1 Peruvian Guano,
Columbian and Ichaboe Guano,
Super-Phosphate of Lime,
Poudrette, Land Plaster and Charcoal Dust,
Bone Dust of different qualities.

For sale by

GEO. W. MAYHER,

Jan. 28—w8tm3t

New-York.

A FARM FOR SALE.

FOR SALE, at \$55 per acre, a farm of about 135 acres, of which over 30 are well timbered, situated in the town of Canillus, Onondaga Co., 2 miles from Canillus Village, on the Central R. R. 6 miles from Syracuse, and a short distance from the Erie Canal. Churches and mills of all kinds near at hand. Excellent markets for all kinds of farm produce, within a short distance. For further particulars as to terms of payment, &c., address the subscriber at Belle Isle P. O., Onondaga Co., N. Y., or call upon him on the premises, or in his absence upon **JONATHAN WHITE, Belle Isle.** **HAROLD M. WHITE.**

March 12—wewo&m2mos.